

FCC FACT SHEET*

Connect American Fund Phase II Auction (Auction 903)

Public Notice – AU Docket No. 17-182

Background: The Chairman is proposing this Public Notice to initiate the pre-auction process for the Connect America Fund Phase II auction (Phase II auction). The Phase II auction will award up to \$198 million annually for 10 years to service providers that commit to offer fixed voice and broadband services to residences and small businesses in areas that are currently unserved by broadband. This auction marks the first time that the FCC will award ongoing high-cost universal service support through competitive bidding in a multiple-round, reverse auction. This auction mechanism will maximize the value the American people receive for the universal service dollars we spend, balancing cost efficiencies with higher-quality services.

What the Public Notice Would Do: Propose procedures to implement the Phase II auction, including:

- **Minimum geographic area for bidding.** Use census block groups as the minimum geographic area into which areas eligible for support can be grouped for bidding in the auction.
- **Short-form application.** Collect information in the pre-auction short-form application to assess, among other things, an applicant’s operational and financial qualifications.
- **Long-form application.** Collect information from winning bidders in a long-form application demonstrating that the winning bidders are technically and financially qualified to meet the relevant Phase II public interest obligations in the areas where they will be awarded support.
- **Reserve prices.** Calculate reserve prices using the Connect America Cost Model (CAM) to ensure that no high-cost census block will receive more Phase II support than the CAM calculates is necessary.
- **Bidding procedures.** Employ a multi-round, descending clock auction. Support will be assigned to no more than one bidder per area. The auction will end after the aggregate support amount of all bids is less than or equal to the total budget and when there is no longer competition for support to any area.

* This document is being released as part of a “permit-but-disclose” proceeding. Any presentations or views on the subject expressed to the Commission or its staff, including by email, must be filed in AU Docket No. 17-182, which may be accessed via the Electronic Comment Filing System (<https://www.fcc.gov/ecfs>). Before filing, participants should familiarize themselves with the Commission’s *ex parte* rules, including the general prohibition on presentations (written and oral) on matters listed on the Sunshine Agenda, which is typically released a week prior to the Commission’s meeting. See 47 CFR § 1.1200 *et seq.*



PUBLIC NOTICE

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COMMENT SOUGHT ON COMPETITIVE BIDDING PROCEDURES AND CERTAIN PROGRAM REQUIREMENTS FOR THE CONNECT AMERICA FUND PHASE II AUCTION (AUCTION 903)*

AU Docket No. 17-182

Comments Date: [(30 days after release)]
Reply Comment Date: [(45 days after release)]

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* This document has been circulated for tentative consideration by the Commission at its August open meeting. The issues referenced in this document and the Commission’s ultimate resolution of those issues remain under consideration and subject to change. This document does not constitute any official action by the Commission. However, the Chairman has determined that, in the interest of promoting the public’s ability to understand the nature and scope of issues under consideration, the public interest would be served by making this document publicly available. The FCC’s *ex parte* rules apply and presentations are subject to “permit-but-disclose” *ex parte* rules. See, e.g., 47 C.F.R. §§ 1.1206, 1.1200(a). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules, including the general prohibition on presentations (written and oral) on matters listed on the Sunshine Agenda, which is typically released a week prior to the Commission’s meeting. See 47 CFR §§ 1.1200(a), 1.1203.

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I. INTRODUCTION

1. By this Public Notice, we initiate the pre-auction process for the Connect America Fund Phase II auction (Phase II auction, auction, or Auction 903). The Phase II auction will award up to \$198 million annually for 10 years to service providers that commit to offer voice and broadband services to fixed locations in unserved high-cost areas.¹ The auction is scheduled to begin in 2018.

2. Auction 903 will be the first auction to award ongoing high-cost universal service support through competitive bidding in a multiple-round, reverse auction. Through this auction, we intend to maximize the value the American people receive for the universal service dollars we spend, balancing higher-quality services with cost efficiencies. Therefore, the auction is designed to select bids from providers that would deploy high-speed broadband and voice services in unserved communities for lower relative levels of support.

3. While many of the pre-auction and bidding procedures and processes proposed for this auction are similar to those used in the Commission’s Mobility Fund Phase I auction and in our spectrum auctions, we propose some new pre-auction and bidding procedures and processes for this auction. As is typical prior to a Commission auction, we propose and seek comment in this Public Notice on the

¹ See *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, 17692-94, 17695, paras. 77-83, 86 (2011) (*USF/ICC Transformation Order and/or FNPRM*), *aff’d sub nom.*, In re: FCC 11-161, 753 F.3d 1015 (10th Cir. 2014) (defining “voice telephony service” as the supported service and requiring Connect America recipients to offer broadband as a condition of receiving support).

procedures to be used in this auction, including (i) how an applicant can become qualified to participate in the auction, (ii) how bidders will submit bids, and (iii) how bids will be processed to determine winners and assign support amounts. We also propose procedures for, among other things, aggregating eligible areas into larger geographic units for bidding, setting reserve prices, and making auction information available to bidders and the public. We ask that commenters advocating a particular procedure provide specific details regarding the costs and benefits of that procedure.

4. We will announce final procedures and other important information concerning Auction 903 after considering comments provided in response to this Public Notice, pursuant to governing statutes and our rules.² Because we expect that the Phase II auction will attract parties that have never participated in a Commission auction, we anticipate providing detailed educational materials and hands-on practice opportunities in advance of the auction.

II. BACKGROUND

5. In the *USF/ICC Transformation Order*, the Commission comprehensively reformed and modernized the high-cost program within the universal service fund and the intercarrier compensation system to focus support on networks capable of providing voice and broadband services.³ The Commission created the Connect America Fund and concluded that support in price cap areas would be provided through a combination of “a new forward-looking model of the cost of constructing modern multi-purpose networks” and a competitive bidding process (Phase II support).⁴ Specifically, the Commission decided to award support through a competitive bidding process in areas of states where incumbent price cap carriers declined model-based support. The Commission sought comment on proposed rules governing the Phase II competitive bidding process, including options regarding basic auction design and the application process.⁵

6. In the *April 2014 Connect America Order*, the Commission decided that extremely high-cost census blocks nationwide also would be eligible for the Phase II auction, and it adopted rules governing participation in the competitive bidding process, the term of support, and eligible telecommunications carrier (ETC) designations.⁶

7. In 2015, 10 price cap carriers accepted over \$1.5 billion in annual Phase II model-based support to provide broadband to nearly 7.3 million consumers in 45 states and the Commonwealth of the Northern Mariana Islands.⁷ Nearly \$175 million in annual Phase II model-based support was declined.⁸

8. In May 2016, the Commission adopted a framework and rules for the Phase II auction, including the public interest obligations; a total budget of \$2.15 billion (\$215 million annually for 10 years); the eligible areas; the eligibility requirements; and the post-auction obligations and oversight

² 47 U.S.C. §§ 154(i), 214, 254, 303(r), 403; 47 CFR pt. 1, subpt. AA; pt. 54, subpt. D.

³ See generally *USF/ICC Transformation Order*, 26 FCC Rcd 17663.

⁴ *Id.* at 17725, para. 156.

⁵ *USF/ICC Transformation FNPRM*, 26 FCC Rcd at 18085-108, paras. 1189-295.

⁶ *Connect America Fund et al.*, Report and Order et al., 29 FCC Rcd 7051, 7060-66, paras. 29-47 (2014) (*April 2014 Connect America Order and/or FNPRM*).

⁷ Press Release, FCC, Carriers Accept Over \$1.5 Billion in Annual Support from Connect America Fund to Expand and Support Broadband for Nearly 7.3 Million Rural Consumers in 45 States and One Territory (Aug. 27, 2015), http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0827/DOC-335082A1.pdf.

⁸ Census blocks in Alaska, Puerto Rico, and the United States Virgin Islands are not eligible for Phase II auction support because the price cap carriers serving these areas elected to continue to receive Phase I frozen support amounts in exchange for meeting tailored service obligations. See *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 5949, 5968, para. 51 & n.109 (2016) (*Phase II Auction Order and/or FNPRM*).

measures.⁹ The Commission also decided that the Part 1 rules on competitive bidding for distributing universal service support would apply to the Phase II auction and provided basic guidance about the procedures that the Commission would use in the auction process.¹⁰

9. In January 2017, we released an order conditionally waiving the Phase II auction program rules to allocate Connect America Fund Phase II support in Connect America-eligible areas in New York in coordination with New York's New NY Broadband Program.¹¹ Specifically, we concluded that funding up to the amount of Connect America Fund Phase II model-based support that Verizon declined in New York—\$170.4 million in total support—would be available to applicants selected in New York's New NY Broadband Program in accordance with the framework we set forth in that order.¹² This decision removed New York census blocks from eligibility for the Phase II auction and reduced the nationwide Phase II auction budget to \$1.98 billion.

10. In February 2017, we adopted weights for comparing bids for different performance tiers and latency levels, as adopted in the *Phase II Auction Order*, and we declined to adopt any other weights for bidders in the Phase II auction.¹³

11. In the *Phase II Auction Order*, the Commission expressed its preference for a multi-round auction to award Phase II funding.¹⁴ According to the Commission, “a multiple-round bid auction would enable bidders . . . to make adjustments in their bidding strategies to facilitate a viable aggregation of geographic areas in which to construct networks and enable competition to drive down support amounts.”¹⁵ Consistent with prior practice, the Commission left the specific details of the auction to be developed as part of the pre-auction process,¹⁶ which we now commence with this Public Notice.

III. MINIMUM GEOGRAPHIC AREA FOR BIDDING

12. As an initial matter, and in the interest of providing bidders with as much flexibility as feasible, we propose to use census block groups containing one or more eligible census blocks as the minimum geographic area for bidding in the auction. Although the Commission previously decided that support will be available for specified eligible census blocks, we propose to aggregate eligible census blocks by census block groups for purposes of bidding. We seek comment on this approach. In August 2016, as directed by the Commission, the Wireline Competition Bureau (WCB) released a preliminary list of eligible census blocks based on June 30, 2015, FCC Form 477 data.¹⁷ This list included approximately

⁹ See generally *Phase II Auction Order*, 31 FCC Rcd 5949.

¹⁰ *Id.* at 5975-79, paras. 80-90.

¹¹ See generally *Connect America Fund; ETC Annual Reports and Certifications*, Order, 32 FCC Rcd 968 (2017) (*New York Auction Order*).

¹² *Id.* at 969, para. 3 & n.7. Verizon declined \$28.4 million in annual Connect America Fund Phase II model-based support for a six-year term—\$170.4 million total over the course of the Connect America Fund Phase II model-based support term.

¹³ *Connect America Fund et al.*, Report and Order and Order on Reconsideration, 32 FCC Rcd 1624 (2017) (*Phase II Auction FNPRM Order*).

¹⁴ *Phase II Auction Order*, 31 FCC Rcd at 5978-79, para. 88.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Wireline Competition Bureau Releases Preliminary List and Map of Eligible Census Blocks for the Connect America Phase II Auction*, Public Notice, 31 FCC Rcd 8870 (WCB 2016) (*Preliminary Phase II Auction Areas Public Notice*).

300,000 eligible census blocks, which are located in 36,000 census block groups, and 20,000 census tracts.¹⁸

13. In the *Phase II Auction Order*, the Commission indicated that it expected to use census block groups that contain one or more eligible census blocks as the minimum geographic unit for bidding, rather than a larger geographic area, such as census tracts or counties.¹⁹ While the Commission reserved the right to require that bids be submitted for census tracts so as to limit the number of discrete biddable units,²⁰ we think that it is unnecessary to do so here. The number of eligible census block groups would not materially increase the complexity of the Phase II auction. At the same time, using census block groups will provide bidders with more flexibility to develop a bidding strategy that aligns with their intended network expansion or construction. Bidding at the census tract level could be particularly problematic for small providers that may seek to construct smaller networks or expand existing networks because a larger minimal geographic area, like a census tract or county, may extend beyond a bidder's service territory, franchise area, or license area. We invite comment on using census block groups as the minimum geographic unit for bids.

14. In addition, the Commission directed WCB to determine the census blocks that will be eligible for the Phase II auction and to publish the final list of eligible census blocks no later than three months prior to the deadline for submission of short-form applications.²¹ The *Preliminary Phase II Auction Areas Public Notice* provides a summary of the Commission's decisions regarding the categories of blocks that will be included in the auction.²² As directed, WCB will update the list of eligible census blocks, based on the most recent publicly available Form 477 data at that time by identifying blocks that are not served by terrestrial, fixed voice and broadband services at speeds of 10/1 Mbps or higher, whether offered by the incumbent price cap carrier or an unsubsidized competitor.²³ Separately, WCB has released additional information and is seeking comment on certain census blocks that may be incorporated into the final list of eligible census blocks, consistent with the Commission's previous decisions.²⁴

IV. PROPOSED APPLICATION REQUIREMENTS

15. In this section, we describe and seek comment on certain information we propose to require each applicant to provide in its short-form application. This information should help promote an effective, efficient, and fair auction and facilitate Commission staff's evaluation of whether a potential bidder is qualified to participate in Auction 903. The *Phase II Auction Order* adopted a two-stage application filing process for the Phase II competitive bidding process.²⁵ The two stages consist of a pre-auction short-form application and a post-auction long-form application. In its short-form application, a potential bidder will seek to establish its eligibility to participate in the Phase II auction. After the

¹⁸ See Federal Communications Commission, *Connect America Phase II Auction Preliminary Eligible Areas* (Aug. 10, 2016), <https://www.fcc.gov/maps/caf-2-auction-preliminary-areas/>. These totals exclude the New York census blocks that were included in the preliminary list of eligible census blocks.

¹⁹ *Phase II Auction Order*, 31 FCC Rcd at 5979, para. 89.

²⁰ *Id.*

²¹ *Id.* at 5973-74, paras. 72-73.

²² See generally *Preliminary Phase II Auction Areas Public Notice*, 31 FCC Rcd 8870.

²³ *Phase II Auction Order*, 31 FCC Rcd at 5973-74, paras. 72-73.

²⁴ *Wireline Competition Bureau Releases Updated List of Census Blocks Eligible for Connect America Phase II Support and Announces Deadlines for Certain Additional Updates in Price Cap and Rate-of-Return Areas*, WC Docket No. 10-90, Public Notice, DA 17-561 (WCB June 8, 2017) (*Phase II Census Blocks Public Notice*).

²⁵ *Phase II Auction Order*, 31 FCC Rcd at 5980, para. 92.

auction, upon receipt of a winning bidder's long-form application, Commission staff will conduct a more extensive review of the winning bidder's qualifications to receive support.

16. The Commission's rules require each applicant seeking to participate in the Phase II auction to provide in its short-form application, among other things, basic ownership information, certifications regarding its qualifications to receive support, and information regarding its operational and financial capabilities.²⁶ The Commission's Phase II short-form application rules also provide for the collection of such additional information as the Commission may require to evaluate an applicant's qualifications to participate in the Phase II auction.²⁷ The information provided in a short-form application helps confirm that an applicant meets certain basic qualifications for participation in the bidding and enables Commission staff to ensure compliance with certain rules and bidding restrictions that help protect the integrity of the auction.

17. After the deadline for filing short-form applications, Commission staff will review all timely submitted applications to determine whether each applicant has complied with the application requirements and provided all information concerning its qualifications for bidding. After this review, WCB and the Wireless Telecommunications Bureau (the Bureaus) will issue a public notice identifying the applications that are complete and those that are incomplete because of minor defects that may be corrected.²⁸ For those applications found to be incomplete, the public notice will set a deadline for the resubmission of corrected applications. After reviewing the resubmitted applications, and well in advance of the start of bidding in Auction 903, the Bureaus will issue a public notice announcing all qualified bidders for the auction. Qualified bidders are those applicants that submitted short-form applications deemed timely-filed and complete. To be clear, however, the finding from Commission staff that a short-form application is complete and that an applicant is qualified to bid only qualifies the applicant to participate in the bidding; it does not authorize a winning bidder to receive Phase II support.

18. After Auction 903 concludes, each winning bidder must submit a long-form application that Commission staff will review to determine whether the winning bidder meets the eligibility requirements for receiving Phase II support and has the financial and technical qualifications to meet the obligations associated with such support. In its long-form application, each winning bidder must submit information about its qualifications, funding, and the network it intends to use to meet its obligations.²⁹ In addition, prior to being authorized to receive Phase II support, each winning bidder must demonstrate that it has been designated as an ETC in the area(s) where it was awarded support and must obtain a letter of credit from a bank meeting the Commission's eligibility requirements.³⁰ We address below the types of further information that may be required in the long-form application. If a winning bidder is not authorized to receive Phase II support (e.g., the bidder fails to file or prosecute its long-form application or its long-form application is dismissed or denied), the winning bidder is in default.³¹

A. State Selections and Impermissible State Overlaps

19. Consistent with the Commission's practice in the Mobility Fund I auction (Auction 901) and its spectrum auctions, we propose to require each applicant to identify in its short-form application the state(s) in which it intends to bid for support in the Phase II auction.³² An applicant will be able to

²⁶ See generally 47 CFR § 54.315.

²⁷ 47 CFR § 54.315(a), (b)(viii).

²⁸ See 47 CFR § 1.21001(d).

²⁹ 47 CFR § 54.315(b).

³⁰ 47 CFR § 54.315(b)(3), (5).

³¹ 47 CFR § 1.21004; *Phase II Auction Order*, 31 FCC Rcd at 6000-01, para. 144.

³² This selection shall also include the District of Columbia and U.S. territories to the extent they include eligible areas.

place bids for eligible areas only in the states identified in its application.³³ This restriction is designed to improve the administrative efficiency of the auction for both bidders and the Commission and to safeguard against coordinated bidding while preserving bidders' flexibility to decide whether to bid for specific census block groups in a state until the start of the auction.

20. To discourage coordinated bidding that may disadvantage other bidders, we propose to prohibit separate applicants that are commonly-controlled or parties to a joint bidding arrangement from bidding in any of the same states. Absent such a restriction, there is a risk that separate bidders could coordinate their bidding through a joint bidding arrangement identified on their respective applications and engage in communications during the competitive bidding process under the exception to our rule prohibiting certain communications during the competitive bidding process.³⁴ Knowing the specific state(s) for which each applicant intends to bid, in combination with the ownership and bidding agreement information collected on the short-form application, will enable us to ensure applicants' compliance. Accordingly, we intend to resolve any state overlaps and determine the specific state(s) in which an applicant is eligible to bid prior to the commencement of the bidding.

21. To implement the restriction described above, we propose to use definitions adopted for similar purposes in our spectrum auctions. Specifically, to identify commonly-controlled entities, we propose to define a "controlling interest" for purposes of the Phase II auction as an individual or entity with positive or negative *de jure* or *de facto* control of the applicant.³⁵ In addition, we propose to adapt the definition of "joint bidding arrangements" that we use in our spectrum auctions to those that (i) relate to any eligible area in the Phase II auction, and (ii) address or communicate bids or bidding strategies, including arrangements regarding Phase II support levels (i.e., bidding percentages) and specific areas on which to bid, as well as any arrangements relating to the post-auction market structure in an eligible area.³⁶ As a result, if two or more applicants are parties to an agreement that falls within this definition, they would be prohibited from bidding in the same state in the Phase II auction.

22. Entities that are commonly-controlled or parties to a joint bidding arrangement have several options for submitting short-form applications to avoid our proposed restriction on state overlaps. It is important that entities carefully consider these options prior to the short-form application filing deadline. At the deadline, the prohibited communications rule takes effect,³⁷ and only minor amendments or modifications to applications will be permitted.³⁸

³³ Nonetheless, we propose below that during the auction, bidders receive certain information pertaining to bidding in all eligible areas – not just eligible areas in the state(s) that bidders select.

³⁴ See 47 CFR § 1.21002(b) (prohibiting communications regarding applicants' bids or bidding strategies unless such applicants are members of a disclosed joint bidding arrangement). In the spectrum auction context, the Commission's rules previously contained an equivalent prohibition and exception, which was significantly amended in 2015. See 47 CFR § 1.2105(a)(2)(ix) (as modified). When the previous rule and exception were in effect, the Commission held that commonly-controlled entities could enter into joint bidding arrangements and identify them in their applications to qualify for the exception. See *Petition for Reconsideration and Motion for Stay of Paging Systems, Inc.*, Memorandum Opinion and Order, 25 FCC Rcd 4036, 4063, para. 86 (2010). We note that while an exception may exist in the Commission's rules, such conduct may be prohibited by the antitrust laws, review under which is subject to other and differing standards under the Sherman and Clayton Acts.

³⁵ See 47 CFR § 1.2105(a)(4)(i). "In the case of a consortium, each member of the consortium shall be considered to have a controlling interest in the consortium." *Id.*

³⁶ For ease of reference, we will adopt the same nomenclature and refer to those agreements as "joint bidding arrangements."

³⁷ See 47 CFR § 1.21002(b).

³⁸ See 47 CFR § 1.21001(d)(4)-(5).

23. *First*, such entities may submit a single short-form application and qualify to bid as one applicant in a state. Our Phase II auction rules do not restrict service providers from determining which of their related entities will apply to participate in bidding. For example, a holding or parent company may choose to submit a single short-form application on behalf of all its affiliated operating companies in one or more states. So that Commission staff can readily identify such applications, we propose requiring each applicant to indicate whether it is submitting the application on behalf of one or more existing operating companies and if so, to identify such companies. Similarly, parties to a joint bidding arrangement may form a consortium or a joint venture and submit a single short-form application that identifies each party to the consortium or joint venture.³⁹ At least one related entity, affiliate, or member of the holding or parent company, consortium, or joint venture must demonstrate that it meets the operational and financial requirements of Section 54.315(a)(7).

24. Consistent with the Commission's practice for consortium and joint venture applicants that are winning bidders in spectrum auctions, we propose that if a holding/parent company or a consortium/joint venture is announced as a winning bidder in Auction 903, the entity may, during the long-form application review process, designate at least one operating company for each state that will be authorized to receive Phase II support for the winning bids. While we would permit more than one operating company to be designated in each state, in order to deter strategic conduct, we propose that a winning bidder would not be allowed to apportion a winning bid for a package of eligible census block groups among multiple operating companies. Because we recognize that the holding company or the consortium may wish to form a new operating company to serve the area associated with its winning bid(s), the holding company or consortium would be permitted to file a long-form application in its own name and during the long-form application review process, identify the operating company for which it seeks authorization to receive support for each winning bid.⁴⁰ The operating company that should be identified as the entity authorized to receive support must be the entity that is designated as the ETC by the relevant state(s) in the areas covered by the winning bid(s) and is named in the letter of credit that each winning bidder must obtain.⁴¹ The entity authorized to receive support is the entity that will be required to meet the associated Phase II public interest obligations.⁴²

25. *Second*, commonly-controlled entities or parties to a joint bidding arrangement may bid in the Phase II auction independently and submit separate short-form applications, provided that they do

³⁹ To the extent entities choose to form a consortium or joint venture, all real parties in interest to any agreements must be disclosed in the short-form application pursuant to Section 1.21001(b)(3) of the Commission's rules. 47 CFR § 1.21001(b)(3). The consortium or joint venture must also be consistent with antitrust laws and must otherwise not be prohibited by law. We note that compliance with our disclosure requirement will not insulate a party from enforcement of the antitrust laws.

⁴⁰ We anticipate that the entities identified through this process would be operating companies or consortium/joint venture members that were named in the short-form application or newly formed entities that are controlled by the applicant or one or more of its members. We caution applicants to be mindful of the Commission's rules prohibiting major modifications to applications when identifying the operating company. The Commission defines major modifications to include "any changes in the ownership of the applicant that constitute an assignment or change of control, or the identity of the applicant," and will deny any long-form applications where a major modification has occurred. 47 CFR § 54.315(b)(6)(iv). Major modifications are prohibited from the filing of the short-form application until Commission staff authorizes Phase II support following its review of the long-form application. To provide applicants with flexibility, however, we propose to classify the designation of an operating company that is controlled by the applicant or a member of a consortium/joint venture during the long-form process as a pro forma transaction that we would not consider a major modification.

⁴¹ 47 CFR § 54.315(c).

⁴² For simplicity, throughout this Public Notice, we refer to the entity that is authorized to receive Phase II support and required to meet the Phase II public interest obligations as the "applicant" or the "bidder." In this context, those terms shall also encompass the operating company(ies) that an applicant designates during the long-form application process.

not submit bids in the same state. We expect that such applicants would exercise due diligence to confirm that no other commonly-controlled entity or party to a joint bidding arrangement, or an entity that controls any party to such an arrangement, has indicated its intent to bid in any of the same states the applicant has selected. To provide further assurance, we propose requiring each applicant to certify that it acknowledges that it cannot place any bids in the same state as (i) another commonly-controlled entity; (ii) another party to a joint bidding arrangement related to Phase II auction support that it is a party to; or (iii) any entity that controls a party to such an arrangement. The Commission's rules require each applicant to disclose in its short-form application information concerning its real parties in interest and its ownership,⁴³ and identify all real parties in interest to any agreements relating to the participation of the applicant in the competitive bidding.⁴⁴ Commission staff would use such information to identify and resolve any impermissible state overlaps prior to the auction.

26. We propose requiring an applicant to provide a brief description of any joint bidding arrangements in its short-form application. We also propose to require every applicant to certify in its short-form application that it has not entered into any explicit or implicit agreements, arrangements, or understandings of any kind related to the support to be sought through the Phase II auction, other than those disclosed in the short-form application. We further propose requiring each winning bidder to submit in its long-form application any updated information regarding the agreements, arrangements, or understandings related to its Phase II auction support disclosed in its short-form application. A winning bidder may also be required to disclose in its long-form application the specific terms, conditions, and parties involved in any agreement into which it has entered and the agreement itself.

27. If during short-form application review Commission staff identifies applicants that are commonly-controlled and/or parties to a joint bidding arrangement where any controlling interests have selected the same states in their respective applications, we propose that all such applications would be deemed to be incomplete on initial review. The Bureaus would inform each affected applicant of the identity of each of the other applicants with which it has an impermissible state overlap and the specific state(s) associated with such overlap. To the extent that an affected applicant has disclosed a joint bidding arrangement with one or more of the other affected applicants, these applicants must decide amongst themselves which applicant will bid in each overlapping state and then revise their short-form applications during the application resubmission period, as appropriate, in order to become qualified to bid. However, any affected applicant that has not disclosed a joint bidding arrangement with the other affected applicants will be barred by the Commission's prohibited communications rule from discussing the overlap with any of the other affected applicants.⁴⁵ As a result, any affected applicant that cannot discuss and resolve the overlap(s) due to the failure to disclose a joint bidding arrangement will be prohibited from bidding in any states where there is an overlap.⁴⁶ Due to the prohibition on certain communications that takes effect as of the short-form application filing deadline, all commonly-controlled entities must have entered into any joint bidding arrangements prior to the short-form filing deadline and disclosed them in their applications to be able to take advantage of the exception afforded by the Commission's rules. By taking these steps, commonly-controlled entities could discuss and jointly resolve any state overlaps identified by Commission staff. After the application resubmission period has ended, the Bureaus would inform each applicant about how it can find out the states in which it is eligible to bid, and the bidding system would permit an applicant to place bids only in those states.

28. We seek comment on this process and whether our proposals efficiently and effectively promote straightforward bidding and safeguard the integrity of the auction.

⁴³ 47 CFR §§ 1.2112(a), 54.315(a)(1).

⁴⁴ 47 CFR § 1.21001(b)(3)-(4).

⁴⁵ 47 CFR § 1.21002(b).

⁴⁶ *Id.* (exempting applicants that "are members of a joint bidding arrangement" that is disclosed in the short-form application).

B. Eligibility to Bid for Performance Tier and Latency Combinations

29. We propose to have Commission staff determine, at the short-form application stage and in advance of the start of bidding in the auction, each applicant's eligibility to bid for the performance tier and latency combinations it has selected in its application. We also propose a standard and a process Commission staff will use in making this determination. Moreover, we propose requiring each applicant to submit additional high-level operational information in its short-form application to aid Commission staff in making this determination, and for each winning bidder to submit updated and supportive information in its long-form application.

30. In the *Phase II Auction Order*, the Commission concluded that it would accept bids for four performance tiers with varying speed and usage allowances and with respect to each tier would provide for bids at either high or low latency.⁴⁷ All bids will be considered simultaneously so that bidders that propose to meet one set of performance standards will compete directly against bidders that propose to meet other performance standards, taking into account the weights adopted by the Commission for each performance tier and latency level.⁴⁸ Pursuant to our rules, each applicant for the Phase II auction must indicate in its short-form application the performance tier and latency combinations for which it intends to bid and the technologies it intends to deploy to meet the relevant public interest obligations. Additionally, each Phase II auction applicant must indicate whether it has at least two years' experience providing a voice, broadband, and/or electric distribution or transmission service and must submit certain financial information.⁴⁹ The Commission's rules also require each applicant to submit any additional information that the Commission may require to establish its eligibility for the weights associated with the applicant's selected performance tier and latency combinations.⁵⁰

31. Requiring a potential bidder to submit evidence in its short-form application that it can meet the service requirements associated with the performance tier and latency combinations for which it intends to bid will help safeguard consumers from situations where bidders that are unable to meet the specified service requirements divert support from bidders that can meet the service requirements. Accordingly, we seek to collect sufficient operational information in the short-form application regarding an applicant's experience providing voice, broadband, and/or electric distribution or transmission service and its plans for provisioning service if awarded support to assess a bidder's technical qualifications to bid for specific performance tier and latency combinations. At the same time, we want to minimize the burden on applicants and Commission staff.

32. We intend to use the short-form application to assess the likelihood that an applicant will default if selected as a winning bidder. If the applicant becomes qualified to bid in the Phase II auction and subsequently becomes a winning bidder, Commission staff will evaluate the information submitted in the long-form application and will rely on the applicant's letter of credit to determine whether an applicant is capable of meeting its Phase II auction obligations in the specific areas where it has been selected as a winning bidder.⁵¹ Accordingly, a determination at the short-form stage that an applicant is eligible to bid for a performance tier and latency combination would not preclude a determination at the long-form application stage that an applicant does not meet the technical qualifications for the

⁴⁷ *Phase II Auction Order*, 31 FCC Rcd at 5956-63, paras. 14-37 (adopting the standards for the Minimum, Baseline, Above Baseline, and Gigabit performance tiers and for High and Low latency bids). The Commission reconsidered the monthly usage allowances for the Above Baseline and Gigabit performance tiers in the *Phase II Auction FNPRM Order*. See *Phase II Auction FNPRM Order*, 32 FCC Rcd at 1651, paras. 71-73.

⁴⁸ *Phase II Auction Order*, 31 FCC Rcd at 5957, 5976-77, paras. 17, 84-85; *Phase II Auction FNPRM Order*, 32 FCC Rcd at 1628, paras. 16-17.

⁴⁹ 47 CFR § 54.315(a)(7).

⁵⁰ 47 CFR § 54.315(a)(5).

⁵¹ 47 CFR § 54.315(b), (c).

performance tier and latency combination and thus will not be authorized to receive Phase II support. In addition, the Commission's adoption of certain non-compliance measures in the event of default—both before a winning bidder is authorized for support and if a winning bidder does not fulfill its Phase II obligations after it has been authorized—should encourage each applicant to select performance tier and latency combinations with public interest obligations that it can reasonably expect to meet.⁵² With these considerations in mind, we describe our proposals: (1) for what information and showing each applicant must submit to establish its qualifications for the performance tier and latency combinations it has selected on its application, (2) for the process Commission staff would use to determine whether an applicant is eligible to bid on those combination(s), and (3) not to adopt any additional non-compliance measures for this process beyond those adopted in the *Phase II Auction Order*.

1. Operational Information

33. We propose to collect high-level operational information from each applicant to complete its operational showing and enable Commission staff to determine whether the applicant is expected to be reasonably capable of meeting the public interest obligations (e.g., speed, usage, latency, and build-out milestones) for each performance tier and latency combination that it selected in its application. As noted above, each applicant seeking to participate in the Phase II auction is required to make certain certifications in its short-form application, including a certification that it is technically qualified to meet the public interest obligations in each tier and in each area for which it seeks support, and a certification regarding its experience in providing voice, broadband, and/or electric distribution or transmission service. The Commission's rules also require an applicant to submit certain information in its short-form application in connection with those certifications.

34. We propose making such determinations on a state-by-state basis. Accordingly, for each selected performance tier and latency combination, an applicant will be required to demonstrate how it intends to provision service if awarded support and that it is reasonably capable of meeting the relevant public interest obligations for each state it selects. Some parties have suggested in the Phase II proceeding that we should only require additional information from, and conduct an eligibility review for, applicants that select certain performance tier and latency combinations.⁵³ Instead, to reduce the risk of defaults, we propose to evaluate all combinations selected by each applicant to determine its eligibility to bid for any such combination.

35. Specifically, we propose to require each applicant to answer the questions listed in Appendix A for each state it selects in its application. The questions are intended to elicit short, narrative responses from each applicant regarding its experience in providing voice, broadband, and/or electric distribution or transmission service, and the network(s) it intends to use to meet its Phase II public interest obligations. The questions are designed to confirm that each applicant has developed a preliminary design or business case for meeting the public interest obligations for its selected performance tier and latency combinations. They ask the applicant to identify the information it could make available to support the assertions in its application. Because we expect that applicants will have already started planning to be ready to deploy the required voice and broadband services upon authorization of Phase II support, we do not anticipate that it will be unduly burdensome to respond to these questions. We seek

⁵² See, e.g., 47 CFR § 54.320(d); *Phase II Auction Order*, 31 FCC Rcd at 5999-6001, paras. 142-45.

⁵³ See Letter from Rebekah P. Goodheart, Counsel to the Association of Missouri Electric Cooperatives, Midwest Energy Cooperative, HomeWorks, Alger Delta & Great Lakes Energy et al., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 et al., at 7-8 (filed Jan. 19, 2017) (Rural Coalition Jan. 19, 2017 *Ex Parte* Letter) (suggesting that only entities that want to bid in the Above Baseline and Gigabit tiers be required to submit additional documentation establishing their eligibility to bid in these tiers). *But see* Letter from Thomas Cohen, Counsel to the American Cable Association, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 et al., at 11 (filed Jan. 30, 2017) (ACA Jan. 30, 2017 *Ex Parte* Letter) (suggesting that unqualified bidders will not only bid in the “two upper tiers”).

comment on the specific questions we propose and ask whether there are other questions we should include.

36. We also seek comment on the assumptions an applicant will need to make about network usage and subscription rates when determining whether it can meet the public interest obligations for its selected performance tier and latency combination(s). For example, the Commission's rules require that each winning bidder provide in its long-form application a certification by a professional engineer that the applicant's proposed network can deliver the required service to at least 95 percent of the required number of locations.⁵⁴ We seek comment on the suggestion by some parties that an applicant be required to demonstrate that its network could be engineered to deliver the required service to every location in the relevant census blocks.⁵⁵ We also seek comment on whether we should require each service provider to assume a subscription rate of at least 70 percent for voice services, broadband services, or both when determining whether it can meet the public interest obligations for its selected performance tiers and latency combinations. This subscription rate is consistent with the assumptions made in the CAM when calculating the amount of support made available.⁵⁶ Some parties in the Phase II proceeding have suggested that we should not expect that all end users passed by a Phase II support recipient will subscribe to a service package at speeds required by the relevant performance tier, or that they will subscribe to the provider's service at all.⁵⁷ We also seek comment on whether we should specify the assumptions an applicant should make concerning per-subscriber data usage to ensure that its network is sufficient to support peak usage busy hour offered load, accounting for the monthly data usage allowance associated with the performance tier(s) the applicant selects in its short-form application.⁵⁸ We seek comment on these issues and on whether we should set any other parameters for assumptions about the network that will be used to meet Phase II obligations.

2. Specific Information Required from Applicants Proposing to Use Spectrum to Provide Service

37. We propose requiring each applicant that intends to use radiofrequency spectrum to submit certain types of information regarding the sufficiency of the spectrum to which it has access to aid Commission staff in determining whether the applicant is expected to be reasonably capable of meeting the public interest obligations for each performance tier and latency combination that it selected in its application.

⁵⁴ 47 CFR § 54.315(b)(2)(iv) (requiring each winning bidder to submit a description of the technology and system design it intends to use, including a network diagram that is certified by a professional engineer).

⁵⁵ Rural Coalition Jan. 19, 2017 *Ex Parte* Letter at 8.

⁵⁶ *Connect America Fund et al.*, Report and Order, 29 FCC Rcd 3964, 4040, para. 179 (WCB 2014) (*CAM Inputs Order*). See also *Phase II Auction Order*, 31 FCC Rcd at 5988, para. 114 n.227 (“[A]n entity that engineers its network based on the assumption that only 40 percent of the customer base in the relevant area will subscribe will not be authorized.”).

⁵⁷ See, e.g., Petition for Reconsideration and Clarification of ViaSat, Inc., WC Docket No. 10-90 et al., at 6 (filed Aug. 8, 2016) (ViaSat Petition for Reconsideration) (“Commercial networks of all types—whether based on fiber, cable, or spectrum—are designed to support a maximum level of usage within a given geographic area based on expected network loading, which takes into account both the projected subscription level among area residents (which will be less than 100 percent even in the best case) and projected usage patterns among those who subscribe to the network.”).

⁵⁸ See, e.g., *CAM Inputs Order*, 29 FCC Rcd at 4006-09, paras. 92-98 (describing how the CAM accounts for busy hour demand). See also *Phase II Auction Order*, 31 FCC Rcd at 5958, 5959, paras. 19, 25 (adopting a monthly usage allowance of 150 GB for the Minimum performance tier, and adopting for the Baseline performance tier a monthly usage allowance of the higher of: 1) 150 GB, or 2) a usage allowance that reflects the average usage of a majority of fixed broadband customers, using Measuring Broadband America data or a similar data source); *Phase II Auction Order FNPRM*, 32 FCC Rcd at 1651, para. 73 (adopting a 2 TB monthly usage allowance for the Above-Baseline and Gigabit performance tiers).

38. The Commission’s Phase II auction rules require a short-form applicant that plans to use radiofrequency spectrum to demonstrate that it has (i) the proper spectrum use authorizations, if applicable; (ii) access to operate on the spectrum it intends to use; and (iii) sufficient spectrum resources to cover peak network usage and meet the minimum performance requirements to serve the fixed locations in eligible areas.⁵⁹ Consistent with the Commission’s approach in the Mobility Fund Phase I auction, for the described spectrum access to be sufficient as of the date of the short-form application, the applicant must have obtained any necessary approvals from the Commission for the spectrum, if applicable,⁶⁰ subject to the earth station license exception for satellite providers described below. The Phase II auction short-form rules also require an applicant to certify that it will retain such authorizations for 10 years.⁶¹

39. A number of parties sought clarification on how an applicant can demonstrate that it has access to sufficient spectrum resources.⁶² We propose that an applicant (i) identify the spectrum band(s) it will use for last mile, backhaul, and any other parts of the network; (ii) describe the total amount of uplink and downlink bandwidth (in megahertz) that it has access to in such spectrum band(s) for last mile;⁶³ (iii) describe the authorizations it has obtained to operate in the spectrum, if applicable; and (iv) list the call signs and/or application file numbers associated with its spectrum authorizations. This spectrum information, combined with the operational and financial information submitted in the short-form application, will allow Commission staff to determine whether an applicant has sufficient spectrum resources and is expected to be reasonably capable of meeting the public interest obligations required by its selected performance tier and latency combination(s).

40. In Appendix B, we identify the spectrum bands that we anticipate could be used for the last mile to meet Phase II obligations and indicate whether the spectrum bands are licensed or unlicensed. We seek comment on whether the individual bands—or, in some cases, the blocks within them, individually or in combination with each other—provide sufficient uplink or downlink bandwidth to support the wireless technologies that a provider may use to meet the Phase II obligations. In addition to the amount of bandwidth, should Commission staff consider the differences between licensed and unlicensed spectrum, or the differences between upper band and lower band frequencies when evaluating whether an applicant has sufficient spectrum resources? Are there other spectrum bands that can offer sufficient uplink or downlink bandwidth—individually or in combination—to meet the various performance tier and latency combination qualifications? If so, what last mile technologies and corresponding last mile network architecture can be used in those spectrum bands?⁶⁴

⁵⁹ 47 CFR § 54.315(a)(6).

⁶⁰ See 47 CFR § 54.315(a)(6); *Phase II Auction Order*, 31 FCC Rcd at 5982, para. 98 (requiring that a short-form applicant “demonstrate it has the proper authorizations, if applicable, and access to operate on the spectrum it intends to use”). See also *Mobility Fund Phase I Auction Scheduled for September 27, 2012; Notice and Filing Requirements and Other Procedures for Auction 901*, Public Notice, 27 FCC Rcd 4725, 4754-55, para. 96 (2012). A pending request for such an approval is not sufficient to satisfy this requirement.

⁶¹ 47 CFR § 54.315(a)(6).

⁶² See, e.g., *ViaSat Petition for Reconsideration at 5-7* (proposing how satellite providers can demonstrate they have the proper authorizations and access to sufficient spectrum); *Oppositions to Petitions for Reconsideration of the Wireless Internet Service Providers Association*, WC Docket No. 10-90 et al., at 3-6 (requesting that the Commission “clarify the requirements for terrestrial spectrum use” and “provide examples so that bidders will have greater certainty before the auction on those types of spectrum solutions that would be in a ‘safe harbor’ of permissibility”).

⁶³ Last mile refers to the portion of the network that transmits services to end-users.

⁶⁴ An example of a network architecture is multiple sites deploying point to multipoint (p-m-p) with sectored antennas.

41. We also propose requiring any applicant that intends to provide service using satellite technology to identify in its short-form application any space station licenses it intends to use in the areas where it intends to bid. We expect that this information, coupled with the additional operational information we will collect in the short-form application, will be sufficient to enable us to assess whether satellite providers have the required authorizations and adequate access to spectrum. Some parties have suggested in the Phase II proceeding that each satellite provider should also be required to demonstrate that it has obtained earth station licenses for the terminals it will use to communicate with satellites.⁶⁵ But satellite providers must bring their earth stations into operation within one year of obtaining a license, and may not be ready to do so within a year of the short-form application deadline.⁶⁶ Because the first Phase II auction interim milestone is not until the end of the third year of support and the final milestone is not until the end of the sixth year of support, a satellite provider could obtain an earth station license during the support term and still meet its obligations. Nevertheless, we would expect that each satellite provider would describe in its short-form application its expected timing for applying for earth station licenses.

3. Collection and Use of Identifiers Associated with Information Submitted to the Commission in Other Contexts

42. In addition to information provided in a short-form application, we propose to allow Commission staff to consider any information that a provider has submitted to the Commission in other contexts when determining whether a service provider is reasonably capable of meeting the public interest obligations for its selected performance tier and latency combinations. This other information would include information submitted to the Commission in other contexts—including data reported in FCC Form 477 Local Telephone Competition and Broadband Report (FCC Form 477), FCC Form 481 Carrier Annual Reporting Data Collection Form (FCC Form 481), FCC Form 499-A Annual Telecommunications Reporting Worksheet (FCC Form 499-A)—and any public information. For example, Commission staff may consider whether an applicant already offers service that meets the public interest obligations associated with its selected performance tier and latency combinations and the number of subscribers to that service.

43. To facilitate Commission staff's collection and review of data provided to the Commission by applicants outside the Phase II auction short-form application process, we propose to collect information in the short-form application about the unique identifiers a provider uses to submit other data to the Commission.

44. Specifically, we propose to collect in the short-form application any FCC Registration Numbers (FRNs) that an applicant or its parent company—and in the case of a holding company applicant, its operating companies—have used to submit their FCC Form 477 data for the past two years.⁶⁷ By collecting the FRNs that an applicant has used to submit FCC Form 477, Commission staff will be able to cross-reference FCC Form 477 data that an applicant has filed for the past two years.

⁶⁵ See Opposition of NTCA—The Rural Broadband Association, WC Docket No. 10-90 et al., at 7 (filed Sept. 2, 2016) (NTCA Opposition).

⁶⁶ 47 CFR §§ 25.133, 54.310(c); ViaSat Petition for Reconsideration at 6. *But see* NTCA Opposition at 7 (filed Sept. 2, 2016) (suggesting that ViaSat “seeks to sidestep an actual demonstration of capacity needed to deliver service in supported areas by pointing generally to space station authority rather than actual user terminal and gateway licenses”).

⁶⁷ Twice a year in FCC Form 477: (1) all facilities-based providers of broadband connections to end users and facilities-based providers of terrestrial mobile wireless broadband must file broadband deployment and subscription data; (2) all incumbent or competitive local exchange carriers and providers of interconnected VoIP must file voice subscription data; and (3) all facilities-based mobile voice providers must file voice deployment and subscription data. 47 CFR §§ 1.7001, 1.7002; FCC, Local Telephone Competition and Broadband Reporting Instructions (FCC Form 477) at 5-9, <https://transition.fcc.gov/form477/477inst.pdf>.

45. Data on where a service provider offers voice and broadband service, the number of subscribers to its voice and broadband services, and the broadband speeds it offers would provide insight into an applicant's experience in providing voice or broadband service. This information could help Commission staff determine whether an applicant can reasonably be expected to meet the public interest obligations associated with the performance tier and latency combinations it has selected in its application. We expect that it would generally be sufficient to review FCC Form 477 data from only the past two years because those data would reflect the services that the applicant is currently offering or recently offered, and would illustrate the extent to which an applicant was able to scale its network in the recent past.

46. We propose to collect in the short-form application any study area codes (SAC) associated with an applicant (or its parent company) that indicates it is an existing ETC.⁶⁸ In the case of a holding company applicant, we propose collecting the SACs of its operating companies. An applicant is required by the Commission's Phase II short-form application rules to disclose its status as an ETC if applicable.⁶⁹ By identifying its SACs, an applicant will be disclosing its status as an existing ETC. As noted above, an applicant need not have obtained an ETC designation in the areas where it seeks Phase II support until after it is named as the winning bidder in those areas.⁷⁰ We propose to collect these SACs even if the relevant entity is not an ETC in the areas where the applicant intends to bid. ETCs also file their annual reports on their FCC Form 481 for each of their SACs.⁷¹ Collecting the SACs associated with every applicant (if applicable) will allow Commission staff to easily cross-reference the Form 481 data filed by the applicant or its parent company, or in the case of a holding company applicant, the Form 481 data filed by its operating companies. An ETC is required to file FCC Form 481 data and certifications regarding its compliance with existing ETC obligations.⁷² Being able to review an ETC's past compliance with its ETC obligations will be useful for determining whether an applicant is reasonably capable of meeting the relevant Phase II obligations.

47. Finally, we propose to collect in the short-form application any FCC Form 499 filer identification numbers that the applicant or its parent company, and in the case of a holding company, its operating companies, have used to file an FCC Form 499-A in the past year, if applicable. Subject to some exceptions, we require telecommunications carriers and certain other providers of telecommunications (including VoIP providers) to report on an annual basis in FCC Form 499-A certain revenues from the prior year for a number of purposes, including for purposes of calculating contributions to the Universal Service Fund and the Telecommunications Relay Services Fund, the administration of the North American Numbering Plan, for shared costs of the local number portability administration, and for calculating and assessing Interstate Telecommunications Service Provider regulatory fees.⁷³ By collecting the relevant FCC Form 499 filer identification numbers, Commission staff would be able to

⁶⁸ Any time that a service provider is designated as an ETC by a state or the Commission, the Universal Service Administrative Company (USAC) will assign that service provider a SAC before the provider begins receiving universal service support.

⁶⁹ 47 CFR § 54.315(a)(3).

⁷⁰ 47 CFR § 54.310(e)(1).

⁷¹ 47 CFR § 54.313.

⁷² See, e.g., 47 CFR § 54.313(a) (requiring that ETCs make a number of certifications regarding their compliance on issues such as service quality standards, ability to function in emergency situations, and reasonably comparable pricing; and also requiring that ETCs submit holding company, operating companies, and affiliate information).

⁷³ See 47 U.S.C. § 159(a) (Interstate Telecommunications Service Provider regulatory fees); 47 CFR §§ 52.17 (number administration), 52.32 (local number portability), 54.706 (Universal Service), and 6.604 (interstate Telecommunications Relay Services Fund), 159(a). See also FCC, 2017 Telecommunications Reporting Worksheet Instructions (FCC Form 499-A) at 4-5, http://www.usac.org/_res/documents/cont/pdf/forms/2017/2017-FCC-Form-499A-Form-Instructions.pdf.

easily cross-reference the most recent FCC Form 499-A filed by the applicant and obtain the revenue data therein, which could be useful in assessing the financial qualifications of the applicant.

48. Because we expect each applicant already keeps track of its identifiers to meet various regulatory obligations, we do not anticipate that requiring these identifiers to be provided in the short-form application would be unduly burdensome for Phase II auction applicants. We seek comment on our proposed collection and use of these various identifiers, and on whether there are other ways Commission staff can leverage data that are already reported to the Commission to assess the qualifications of Phase II applicants.

4. Precluding Eligibility to Bid for Certain Performance Tier and Latency Combinations

49. To streamline the review of short-form applications, we propose to preclude an applicant that intends to use certain technologies from selecting certain performance tier and latency combinations that are inconsistent with those technologies. For example, we propose to prohibit satellite providers from selecting low latency in combination with any of the performance tiers. As satellite providers have acknowledged, they cannot meet the low latency requirement that 95 percent or more of all peak period measurements of network round trip latency are at or below 100 milliseconds due to the limitations of geostationary spacecraft.⁷⁴ Moreover, based on the record and publicly available Form 477 data, we are not convinced that a satellite provider would be able to persuade the Commission staff that the provider is reasonably capable of offering broadband at speeds of 1 Gbps downstream/500 Mbps upstream and 2 TB of monthly data to consumers by the first interim build-out milestone. No satellite provider reports offering broadband speeds in excess of 25 Mbps downstream in FCC Form 477 data (as of June 30, 2016),⁷⁵ and ViaSat reports that it is the first satellite provider to offer a 150 GB monthly data allowance.⁷⁶ While ViaSat claims that it is deploying networks that will be capable of offering speeds of at least 100 Mbps in the near term, the record lacks specificity on whether or when satellite providers would be able to offer 1 Gbps /500 Mbps speeds and a minimum monthly 2 TB data usage allowance to U.S. consumers.⁷⁷

50. While a certain technology may eventually be able to meet the public interest obligations required by certain performance tier and latency combinations, it may not serve the public interest to award Phase II support for such a technology at this time based on possible future technological advances.

⁷⁴ See *Phase II Auction Order*, 31 FCC Rcd at 5960, paras. 29-30; see also Letter from John P. Janka, Counsel to ViaSat, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 et al., at 4 (filed Aug. 21, 2015) (claiming that the “100 milliseconds latency requirement” “categorically exclude[s] satellite broadband providers that use geostationary spacecraft”); Petition for Reconsideration of Hughes Network Systems, LLC, WC Docket No. 10-90, at 9 (filed Apr. 20, 2017) (Hughes Petition for Reconsideration) (noting “the inevitable latency resulting from the data travel time to and from a geostationary satellite”).

⁷⁵ Federal Communications Commission, Broadband Deployment Data from FCC Form 477, <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477> (providing FCC Form 477 data as of June 30, 2016).

⁷⁶ Letter from John P. Janka, Counsel to ViaSat, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 et al., at 1 (filed Feb. 21, 2017). See also Hughes Petition for Reconsideration, at Attach. (stating that Hughes offers “a 50 GB/month data allowance and a speed guarantee of 25/3 Mbps”).

⁷⁷ See, e.g., Hughes Petition for Reconsideration at 2 (claiming that Hughes is “evaluating various initiatives which will . . . provide even greater capacity and higher speeds to its U.S. satellite broadband customers”); Letter from John P. Janka, Counsel to ViaSat, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 et al., at 4 (filed Apr. 14, 2016) (claiming that ViaSat-2, which deployed in 2017, will “support peak speeds of 100-plus Mbps” and that ViaSat-3 platform “which will begin deployment in 2019” will provide “even higher service speeds”). See also Press Release, ViaSat, ViaSat-2 Successfully Launched (June 2, 2017), <https://www.viasat.com/news/viasat-2-successfully-launched>.

Should applicants be limited to bidding on performance tier and latency combinations that they or similar providers are currently offering? Specifically, what combination of technologies, performance tiers, and latency levels should we prohibit?

51. We seek comment on the above proposals for determining an applicant's eligibility to bid on the performance tier and latency combination(s) selected in its short-form application. A party submitting alternative proposals should explain how its proposal appropriately balances the Commission's objective of assessing an applicant's capability to meet the Phase II obligations with our intent not to impose undue costs on applicants or the Commission.

5. Standard for Evaluating Information on Performance Tier and Latency Combinations; Initial and Final Determinations of Eligibility to Bid on Selected Combinations

52. We propose that Commission staff review the information submitted by an applicant in its short-form application and any other relevant information available to staff to determine whether the applicant has planned how it would provide service if awarded support and is therefore expected to be reasonably capable of meeting the public interest obligations for its selected performance tier and latency combinations in its selected states.⁷⁸ We propose that if staff finds that an applicant is reasonably expected to be capable of meeting the relevant public interest obligations in a state, the applicant would be eligible to bid for its selected performance tier and latency combinations in that state.

53. If Commission staff, in its initial review, is unable to find that an applicant can reasonably be expected to meet the relevant public interest obligations based on the information submitted in its short-form application, the Bureaus would deem the application incomplete, and the applicant would have another opportunity during the application resubmission period to submit additional information to demonstrate that it meets this standard. The Bureaus would notify the applicant that additional information is required to assess the applicant's eligibility to bid for any or all of the specific states and performance tier and latency combinations selected in its short-form application. During the application resubmission period, an applicant would be able to submit additional information to establish its eligibility to bid for the relevant performance tier and latency combinations. An applicant would also have the option of selecting a lesser performance tier and latency combination for which it might be more likely to be technically qualified. We would consider these to be permissible minor modifications of the short-form application.⁷⁹ Once the application resubmission period has ended, the Bureaus would make their final determination of an applicant's eligibility to bid for any or all of the specific states and performance tier and latency combinations selected in its application, and then notify each applicant in which states and for which performance tier and latency combinations it is eligible to bid.⁸⁰ The bidding system will be configured to permit a bidder to bid only in the state(s) and for the performance tier and latency combinations on which it is eligible to bid. We seek comment on this proposed process.

6. Non-Compliance Measures

54. We propose not to adopt any specific measures or remedies related to an applicant's representations in its short-form or long-form applications of its capabilities with respect to the performance tier and latency combination(s) for which it seeks to be eligible to bid.⁸¹ First, we expect

⁷⁸ *Phase II Auction Order*, 31 FCC Rcd at 5982, para. 99.

⁷⁹ See 47 CFR § 1.21001(d)(5).

⁸⁰ A finding that it is not reasonable to expect that an applicant is capable of meeting the relevant public interest obligations would not necessarily mean that a potential bidder is incapable of meeting the public interest obligations. Instead, such a finding would mean that it is not in the public interest to risk awarding support to an applicant that Commission staff believe is likely to default or be unable to fulfill its obligations.

⁸¹ *But see* Rural Coalition Jan. 19, 2017 *Ex Parte* Letter at 9 (suggesting that the Commission "should adopt strict ex post remedies to further discourage potential abuse" and "consider barring bidders that abuse the process by making

(continued....)

that the Commission's Phase II auction default rules and the measures adopted by the Commission relating to an authorized recipient that does not meet its obligations will impress upon each applicant the importance of both ensuring that it can meet the technical qualifications associated with each performance tier and latency combination for which it is eligible to bid and submitting documentation that accurately reflects its capabilities.⁸² Second, to the extent documentation may be falsified, we have broad discretion to impose additional non-compliance measures on a defaulting winning bidder, including disqualifying that entity from future universal service competitive bidding.⁸³ Finally, each applicant is required to declare, under the penalty of perjury, that the information in its short-form and long-form applications is true and correct. We believe these collective measures provide adequate incentives for an applicant to submit truthful and accurate evidence of its technical qualifications. We seek comment on this analysis. To the extent commenters believe that additional measures may be needed to ensure that Commission staff receive accurate information, they should explain why the current non-compliance scheme is inadequate and describe with specificity the additional non-compliance measures that they propose.

C. Financial Qualifications

55. In addition to the audited financial statements that certain applicants are already required to provide at the short-form stage to establish their financial qualifications to provide broadband service, we propose to require all applicants to submit financial statements. We also propose to require applicants to identify and report certain specific information from their financial statements on the short-form application.

56. In the *Phase II Auction Order*, the Commission required each applicant for the Phase II auction to certify its financial capabilities to provide the required services within the specified timeframe in the geographic areas for which it seeks support.⁸⁴ In addition, an applicant certifying that it has provided voice, broadband, and/or electric transmission or distribution services for at least two years must submit audited financial statements from the prior fiscal year, including balance sheets, and statements of net income and cash flow, unless it has not obtained an audit of financial statements in the ordinary course of business.⁸⁵ If the applicant cannot make that certification, it must submit (1) audited financial statements for the three most recent consecutive fiscal years, including balance sheets, and statements of net income, and cash flow, and (2) a letter of interest from a qualified bank with terms acceptable to the Commission that the bank would provide a letter of credit to the bidder if the bidder were selected for support of a certain dollar magnitude.⁸⁶ We seek comment on whether we should also require applicants submitting audited financial statements to identify and report certain specific information from their most recent financial statements on the short-form application to facilitate our review of their financial capabilities.

57. In the *Phase II Auction Order*, the Commission permitted an applicant certifying that it has provided voice, broadband, and/or electric transmission or distribution services for at least two years, but that is not audited in the ordinary course of business to wait until after it is announced as a winning bidder to submit audited financial statements. Such an applicant must certify that it will submit the prior fiscal year's audited financial statements by the deadline during the long-form application process.⁸⁷ We

(Continued from previous page) _____
materially false claims as to their technical capability to deliver in a given tier from participating in future Connect America Fund auctions").

⁸² 47 CFR § 54.320; *Phase II Auction Order*, 31 FCC Rcd at 6000-01, paras. 143-45.

⁸³ 47 CFR § 1.21004.

⁸⁴ 47 CFR § 54.315(a)(2); *Phase II Auction Order*, 31 FCC Rcd at 5981, para. 96.

⁸⁵ 47 CFR § 54.315(a)(7)(i); *Phase II Auction Order*, 31 FCC Rcd at 5982-84, paras. 100-02.

⁸⁶ 47 CFR § 54.315(a)(7)(ii); *Phase II Auction Order*, 31 FCC Rcd at 5985, para. 106.

⁸⁷ *Phase II Auction Order*, 31 FCC Rcd at 5983-84, paras. 102-03.

seek comment on whether we should require these applicants to submit unaudited financial statements with the short-form application and to identify and report the same information in the short-form application as an applicant that submits audited financial statements.

58. Based on the Commission's experience with the rural broadband experiments, we propose that Commission staff use criteria similar to those used there in evaluating the financial statements of those applications, including a five-point scale described below. Specifically, we propose to require an applicant to respond to one financial question and submit four financial metrics. An applicant could receive one point for each of the five areas, and those points would be summed as shown in the table below. The five-point scale should help Commission staff evaluate, quickly and efficiently, an applicant's financial qualifications, and we would expect an applicant with a score of at least three points to be financially qualified to bid in the auction. An applicant with a score of less than three points or a score of zero for the ratio of current assets to current liabilities and total equity divided by total capital would warrant a more in-depth review of the full set of financial statements submitted with the short-form application, as well as other information, to determine whether the applicant is qualified to bid in the Phase II auction.

59. Specifically, the short-form application would ask an applicant whether, to the extent that its prior year-end financial statements were audited, it had received an unmodified, non-qualified opinion from the auditor; an applicant would receive one point for a "yes" answer. Each applicant would also enter the following metrics from its prior year-end financial statements: (1) latest operating margins (i.e., operating revenue less operating expenses), where an operating margin greater than zero receives one point; (2) time interest earned ratio (TIER), where TIER ((net income plus interest expense)/interest expense) greater than or equal to 1.25 would receive one point; (3) current ratio (i.e., current assets divided by current liabilities), where a ratio greater than or equal to 2 would receive one point; and (4) total equity divided by total capital, where a result greater or equal to 0.5 would receive one point. This scoring methodology is summarized in the chart below:

If the applicant has audited financial statements, did it receive an un-modified (non-qualified) opinion?	Yes	+1
Operating margin	>0	+1
Times Interest Earned Ratio (TIER)	>=1.25	+1
Ratio current assets/current liabilities	>=2	+1
Total equity/total capital (total equity plus total liabilities)	>=0.5	+1

60. We propose common and simple financial metrics to evaluate the financial position of the types of applicants that we anticipate will seek to participate in the auction. The question regarding an applicant's audit opinion measures both the applicant's financial condition and operations. The metric for operating margin measures core profitability, and the metrics for current ratio and ratio of equity to capital measure the applicant's short- and long-form financial condition, respectively. TIER measures the ability to pay the interest on outstanding debt. We seek comment on these five evaluative criteria. Are there additional metrics that we should consider that are both common and simple and can be used to analyze the financial qualifications of auction applicants?

61. The Commission staff's determination at the short-form stage that an applicant is financially qualified to bid would not preclude a determination at the long-form application review stage that an applicant is not authorized to receive Phase II support. The Commission's rules require that during the long-form application stage a winning bidder: (1) certify that it will have available funds for

all project costs that exceed the amount of Phase II support for the first two years, (2) submit a description of how the required construction will be funded, and (3) obtain a letter of credit.⁸⁸

D. Due Diligence Certification

62. We propose requiring an applicant to certify that it has performed due diligence concerning its potential participation in the Phase II auction. Specifically, we propose that each applicant make the following certification in its application under penalty of perjury:

The applicant acknowledges that it has sole responsibility for investigating and evaluating all technical and marketplace factors that may have a bearing on the level of Connect America Fund Phase II support it submits as a bid, and that, if the applicant wins support, it will be able to build and operate facilities in accordance with the Connect America Fund obligations and the Commission's rules generally.

63. This proposed certification will help ensure that each applicant acknowledges and accepts responsibility for its bids and any forfeitures imposed in the event of default,⁸⁹ and that the applicant will not attempt to place responsibility for the consequences of its bidding activity on either the Commission or third parties. We seek comment on this proposal.

E. Long-Form Application Requirements

64. We propose to require each winning bidder to submit certain information in its long-form application to aid the Commission staff in evaluating whether the winning bidder is technically and financially qualified to meet the relevant Phase II public interest obligations in the areas where it was awarded support. As required by the Commission's rules, a winning bidder must also provide in its long-form application more in-depth information regarding the networks it intends to use to meet its Phase II obligations and how it intends to fund such networks.⁹⁰ Among other things, we propose to require each applicant to provide in its long-form application any updates to its spectrum authorizations or spectrum access and to certify in its long-form application that it will retain access to the spectrum for at least 10 years from the date of the funding authorization. Requiring this information in the long-form application will provide us with additional assurance that a winning bidder intends to retain appropriate access to spectrum, particularly if any changes identified in the long-form application were not certified to in the short-form application. We expect to provide guidance in a future public notice regarding the specific types of information that each winning bidder will be required to submit in its long-form application to support its operational assertions in the short-form application.

V. AUCTION RESERVE PRICES

65. We propose that the reserve price for each census block group will be the sum of the support amounts calculated for each eligible census block in that census block group, subject to the cap on extremely high-cost locations. For all census blocks with average costs above the funding threshold but below the extremely high-cost threshold (i.e., high-cost census blocks), we propose to set a reserve price based on the support per-location calculated by the CAM for that census block. This would ensure that no high-cost census block will receive more Connect America Fund Phase II support than the CAM calculates is necessary for deploying and operating a voice and broadband-capable network in that census block.⁹¹

⁸⁸ 47 CFR § 54.315(b) & (c).

⁸⁹ See *Phase II Auction Order*, 31 FCC Rcd at 5984, 6000, paras. 104, 143.

⁹⁰ 47 CFR § 54.315(b)(iv), (v) & (vi).

⁹¹ The Commission decided to average costs at the census block level for the Phase II auction, which differs from the approach taken in the offer of model-based support for price cap carriers where the CAM calculated the costs associated with each carrier, wire center, or splitter separately, on a sub-census block basis. *Phase II Auction Order*, 31 FCC Rcd at 5971-72, paras. 62-68.

66. Under the Commission's rules on competitive bidding for high-cost universal service support, the Commission has the discretion to establish maximum acceptable per-unit bid amounts and reserve amounts, separate and apart from any maximum opening bids.⁹² In the *Phase II Auction Order*, the Commission decided that bids in excess of a reserve price set using the CAM will not be accepted, and that winning bidders generally would be those that accept the lowest percentages of the reserve price for the areas for which they bid.⁹³ Assigned support amounts would take into account the performance tiers and latencies specified in the winning bids.⁹⁴ The Commission also decided to cap the amount of support per location provided to extremely high-cost census blocks.⁹⁵

67. For census blocks with average costs that exceed the extremely high-cost threshold, we propose imposing a \$146.10 per-location-per-month funding cap so that the reserve price will be equal to \$146.10 multiplied by the number of locations in that census block as determined by the CAM. This cap would be calculated by starting with the extremely high-cost benchmark of \$198.60 and subtracting the funding threshold of \$52.50 that WCB determined could reasonably be recovered through end-user charges.⁹⁶ This approach would help ensure that Phase II auction support is not unreasonably skewed toward areas that the Commission has deemed the most expensive to serve and the most remote.⁹⁷ These areas also tend to be sparsely populated.⁹⁸ If we were to allocate all the available Connect America Fund support to areas where few consumers live, we would leave many consumers unserved. In circumstances where bidders can make a business case to serve these extremely high-cost areas with support at or below the capped amount, they would be able to bid for support in these areas. To the extent bidders cannot, the census blocks would not receive bids, and thus would remain eligible for the Remote Areas Fund auction if they continue to be unserved.

68. Finally, for administrative simplicity, we propose to round the reserve prices for each census block group to the nearest dollar. Because auction participants will place bids for annual support amounts, we propose to multiply the monthly reserve price for a census block group by 12 and then perform the rounding. As a simplified example, if an annual reserve price for a census block group is \$15,000.49, the reserve price would be rounded down to \$15,000; and if a reserve price is \$15,000.50, the reserve price would be rounded up to \$15,001. Thus, any census block group that has a reserve price of less than \$0.50 would be ineligible for the Phase II auction.

69. When it released the preliminarily eligible census block list in August 2016 based on the June 30, 2015 FCC Form 477 data, WCB included the annual CAM-calculated support amounts for the high-cost census blocks and capped the CAM-calculated support amount at \$146.10 per location-per-month for extremely high-cost census blocks.⁹⁹ That list is available at https://apps.fcc.gov/edocs_public/attachmatch/DA-16-908A1_Rcd.pdf. Commenters can refer to this list and round the annual support amounts to the nearest dollar for each census block group to see approximate reserve prices for these areas based on our proposed methodology. To be clear, the list is

⁹² 47 CFR § 1.21003(c)(3).

⁹³ *Phase II Auction Order*, 31 FCC Rcd at 5977, 5979, paras. 85, 90.

⁹⁴ *Id.* at 5977, para. 85.

⁹⁵ *Id.*

⁹⁶ See *Wireline Competition Bureau Announces Connect America Phase II Support Amounts Offered to Price Cap Carriers to Expand Rural Broadband*, Public Notice, 30 FCC Rcd 3905, 3905, n.1 (WCB Apr. 29, 2015) (*Model-Based Support Offers Public Notice*); (noting that the extremely high-cost benchmark for the offer of model-based support was \$198.60); *CAM Inputs Order*, 29 FCC Rcd at 4033-41, paras. 164-82.

⁹⁷ *USF/ICC Transformation Order*, 26 FCC Rcd at 17837-39, paras. 533-38.

⁹⁸ *Id.* at 17837, para. 533.

⁹⁹ *Preliminary Phase II Auction Areas Public Notice*, 31 FCC Rcd 8870, 8872.

intended to be illustrative for purposes of showing *potential* reserve prices and preliminary eligible areas, and parties should not assume that support ultimately will be made available in all the areas listed. For example, the census blocks located in New York will be removed from the final list because they are no longer eligible for the Phase II auction due to our decision to allocate up to \$170.4 million dollars in partnership with New York's New NY Broadband program in eligible census blocks.¹⁰⁰ In addition, WCB will update the eligible census block list to reflect publicly available Form 477 data and may further modify the list in light of the public notice that WCB recently released seeking comment on certain census blocks.¹⁰¹ A final list of eligible census blocks will be released at least three months prior to the short-form application filing deadline.¹⁰²

70. We seek comment on these proposals and on any other proposed methodology for calculating reserve prices using the Connect America Cost Model.

VI. PROPOSED BIDDING PROCEDURES

71. We propose to use a descending clock auction to identify the providers that will be eligible to receive Phase II support and to establish the amount of support that each bidder will be eligible to receive using a "second-price" rule,¹⁰³ subject to post-auction application review.¹⁰⁴ In the *Phase II Auction FNPRM Order*, the Commission decided that bids for different areas at specified performance tier and latency levels will be compared to each other based on the percentage each bid represents of their respective areas' reserve prices.¹⁰⁵ In the sections below, we discuss and seek comment on the details of the proposed auction format and procedures. We also direct the Bureaus to compile and release a guide that provides further technical and mathematical detail regarding the bidding, assignment, and support amount determination procedures proposed here, as well as examples for potential bidders.

72. The Bureaus will conduct the Phase II auction over the Internet, and bidders will upload bids in a specified file format for processing by the bidding system. We propose that the bidding system announce a base clock percentage before each round. The base clock percentage is used to delimit the acceptable prices in each round of the auction and as a common unit to compare bids for different performance tiers and latencies. The round's base clock percentage implies an annual support amount for a given area at the performance tier and latency combination specified in a bid using the formula determined in the *Phase II Auction FNPRM Order*.¹⁰⁶

73. The base clock percentage begins at a high level, implying a support amount that is equal to or close to the full reserve price, and which descends from one round to the next. In a round, a bidder

¹⁰⁰ The list of census blocks that are preliminarily eligible for Connect America support that will be awarded in partnership with New York's New NY Broadband Program is available at: <https://nysbroadband.ny.gov/new-ny-broadband-program/phase-3>. See also *New York Auction Order*, 32 FCC Rcd 986.

¹⁰¹ *Phase II Census Blocks Public Notice*, DA 17-561.

¹⁰² *Phase II Auction Order*, 31 FCC Rcd at 5974, para. 73.

¹⁰³ A second-price payment rule in this context generalizes the concept that the lowest bidder for an area will be awarded support at the price (or in this case, percentage) at which its next closest competitor dropped out of bidding, which will be at least as high as its bid price. Specific procedures are set forth below in Sections [[VI.B.3]] "Bid Processing in the Clearing Round" and [[VI.B.4]] "Bids and Bid Processing if the Budget Cleared in a Previous Round".

¹⁰⁴ As described above, before a winning bidder can receive support, the bidder will need to submit a long-form application, letter of credit, and obtain an ETC designation in the relevant areas. Commission staff will evaluate the information submitted to determine whether an applicant is capable of meeting the relevant Phase II auction obligations in the specific areas where it has been selected as a winning bidder.

¹⁰⁵ *Phase II Auction Order*, 31 FCC Rcd at 5979, para. 90.

¹⁰⁶ *Phase II Auction FNPRM Order*, 32 FCC Rcd at 1627-28, para. 15

can submit a bid for a given area at a performance tier and latency combination at any percentage that is greater than or equal to the round's base clock percentage and less than the previous round's base clock percentage. A bid indicates that the bidder is willing to provide service to the area that meets the specified performance tier and latency requirements in exchange for support that is no less than the support amount implied by the bid percentage.

74. The base clock percentage will continue to descend in a series of bidding rounds, implying diminishing support amounts, until the aggregate amount of support represented by the bids placed in a round at the base clock percentage is no greater than the budget. At that point, when the budget "clears," the bidding system will assign support to current bidders in areas where there are not competing bids from two or more bidders to provide service. Bidding will continue, however, for areas where there are competing bids, and the clock will continue to descend in subsequent rounds. When there is no longer competition for any area, the auction will end. A winning bidder may receive support in amounts at least as high, because of the second-price rule, as the support amounts corresponding to their bid percentages.

A. Bid Collection

1. Round Structure

75. We propose that the Phase II descending clock auction will consist of sequential bidding rounds according to an announced schedule providing the start time and closing time of each bidding round. As is typical for Commission auctions, we propose to retain the discretion to change the bidding schedule—with advance notice to bidders—in order to foster an auction pace that reasonably balances speed with giving bidders sufficient time to study round results and adjust their bidding strategies. Under this proposal, the Bureaus may modify the amount of time for bidding rounds, the amount of time between rounds, or the number of rounds per day, depending on bidding activity and other factors. We seek comment on this proposal. Commenters suggesting alternatives to this proposal should address any other means the Commission should use to manage the auction pace.

2. Clock Percentages and Implied Support Amounts Based on Performance Tier and Latency Weights

76. We propose that under our descending clock auction format, the base clock will be denominated in terms of a percentage, which will be decremented for each round. To determine the annual support amount implied at each percentage, the percentage will be adjusted for the weights for each performance tier and latency combination for which bids will be accepted, and an area-specific reserve price, as in the formula set forth below.¹⁰⁷ This proposed approach is consistent with previous Commission decisions regarding the Phase II auction.

77. In the *Phase II Auction Order*, the Commission concluded that it would accept bids for four performance tiers with varying speed and usage allowances and, for each performance tier, would provide for bids at either high or low latency.¹⁰⁸ The Commission further decided to consider all bids simultaneously so that bidders proposing varying performance standards would be competing directly against each other for the limited Phase II budget.¹⁰⁹ In addition, the Commission decided that bidders

¹⁰⁷ See *infra* paragraph [[79]].

¹⁰⁸ *Phase II Auction Order*, 31 FCC Rcd at 5956, 5976, paras. 14, 84. We refer to these individually as performance tier (T) and latency (L), and collectively as performance tier and latency combination. The performance obligations associated with each performance tier and latency are discussed in the *Phase II Auction Order*, 31 FCC Rcd at 5956-63, paras. 14-37, and the *Phase II Auction FNPRM Order*, 32 FCC Rcd at 1651, paras. 71-73.

¹⁰⁹ *Phase II Auction Order*, 31 FCC Rcd at 5957, 5976, paras. 17, 84.

would bid for support expressed as a fraction of an area's reserve price and declined to adopt an approach that would conduct bidding on a dollar per location basis.¹¹⁰

78. In the *Phase II Auction FNPRM Order*, the Commission adopted weights to compare bids for the performance tiers and latency combinations adopted in the *Phase II Auction Order*.¹¹¹ We determined that Minimum performance tier bids will have a 65 weight; Baseline performance tier bids will have a 45 weight; Above Baseline performance tier bids will have a 15 weight; and Gigabit performance tier bids will have zero weight.¹¹² Moreover, high latency bids will have a 25 weight and low latency bids will have zero weight added to their respective performance tier weight. The lowest possible weight for a performance tier and latency combination is 0, and the highest possible weight is 90. Each weight uniquely defines a performance tier and latency combination, as shown in the table below.

Weights for Performance Tiers and Latencies							
Minimum		Baseline		Above Baseline		Gigabit	
High Latency	Low Latency	High Latency	Low Latency	High Latency	Low Latency	High Latency	Low Latency
90	65	70	45	40	15	25	0

Our proposal for a clock auction format with a base clock percentage and weights for performance tier and latency combinations implements these Commission decisions and provides a simple way to compare bids of multiple types. We seek comment on this proposal.

79. We propose that the base clock percentage in each round will imply a total amount of annual support in dollars for each area available for bidding, based on the performance tier and latency ("T+L") combination specified in the bid. The annual support amount implied at the base clock percentage will be the smaller of the reserve price and the annual support amount obtained by using a formula that incorporates the performance tier and latency weights. Specifically:

$$\text{Implied Annual Support Amount (at the base clock percentage)} = \min \left\{ R, \left(\frac{BC - (T+L)}{100} \right) R \right\}$$

where:

R denotes the area's reserve price

T denotes the tier weight

L denotes the latency weight

BC denotes the base clock percentage

80. Because the highest implied support amount can never exceed an area's reserve price, when the base clock percentage is greater than 100, the total implied annual support for lower weighted performance tier and latency combinations may remain at an area's reserve price for one or more rounds, while the total implied annual support of one or more higher weighted performance tier and latency combinations may be lower than an area's reserve price.¹¹³ When the base clock percentage is decremented below 100, the total implied annual support for all area, performance tier and latency combinations will be below the areas' respective reserve prices.

¹¹⁰ *Id.* at 5977, para. 85.

¹¹¹ *Phase II Auction FNPRM Order*, 32 FCC Rcd at 1628, para. 16.

¹¹² *Id.*

¹¹³ For example, consider a bid at the Baseline performance tier with low latency, which has a T+L weight of 45. If the base clock percentage is 170, the implied support for the bid is equal to the lower of the reserve price for the area, *R*, and $\{(170-45)/100\} * R$, which is $(125/100) * R$ or $1.25 * R$. Since *R* is less than $1.25 * R$, the implied support for the bid is equal to the reserve price.

81. The formula above (the “implied support formula”) can be used to determine the implied support at any price point percentage by substituting a given percentage for the base clock percentage.

3. Acceptable Bid Amounts

82. We propose that, in each round, a bidder may place a bid at any price point percentage equal to or greater than the base clock percentage and strictly less than the previous round’s base clock percentage, specified up to two decimal places. This proposal will reduce the likelihood of ties and allow bids to correspond to smaller increments in annual support amounts. We seek comment on this proposal.

83. We propose that bids must imply a support amount that is one percent or more of an area’s reserve price to be acceptable. For a given performance tier and latency combination, when the price point percentage equals T+L, the formula implies that the annual support amount is zero. When the price point percentage equals T+L+1, the formula implies an annual support amount that is one percent of the area’s reserve price. Hence, a bid must be at least T+L+1 to be accepted by the bidding system.¹¹⁴ We seek comment on this proposal.

84. We anticipate that the ability to submit bids at price points other than the base clock percentage, as proposed, will be especially useful to a bidder when the lowest support amount it will accept for an area corresponds to a percentage between the base clock percentages for two consecutive rounds. In such a case, the proposed option will allow the bidder to more precisely indicate the point at which it wishes to drop out of bidding for the area. In contrast, a bidder still willing to accept a support amount equal to or less than that implied by the base clock percentage will simply bid at the base clock percentage. In rounds before the budget clears, a bidder may bid at an intermediate price point in one round and then bid again for the same area in a subsequent round, but its ability to do so is limited. In rounds after the budget clears, no area switching is permitted.

4. Bidding for Geographic Areas

85. We propose that the minimum geographic area for bidding will be a census block group.¹¹⁵ A bid for a census block group is a bid for support for the eligible census blocks within that census block group.¹¹⁶

86. To simplify the bidding process, ensure manageable bid processing, and promote straightforward bidding, we propose for Auction 903 to allow a bidder to place only one bid on a given geographic area in a round, whether that area is bid on singly or included in a package bid. We propose to extend this restriction on a bidder placing overlapping area bids in a round to also apply to multiple bidders that are able to coordinate their bidding, which includes commonly-controlled bidders and bidders subject to joint bidding arrangements. We anticipate that the restriction on overlapping bids by a single bidder will simplify bid strategies for bidders and eliminates the need for the auction system to use mathematical optimization to consider multiple ways to assign winning bids to a bidder, thus simplifying bid processing. The restriction on overlapping bids by multiple bidders able to coordinate their bidding should promote straightforward bidding by eliminating the possibility that separate bidders may coordinate their bids in ways that may disadvantage other bidders in the auction.

87. To implement the restriction on bids by a single bidder, we propose that the bidding system not accept multiple bids by a bidder in a round that include the same area. To implement the restriction on multiple bidders that are able to coordinate their bidding, we propose to restrict the ability

¹¹⁴ For example, for a bid with a T+L weight of 45 (a Baseline bid with low latency), implied support would be 0 when the base clock percentage is 45: implied support equals the lower of the reserve price R, and $\{(45-45)/100\} * R$, which is 0. Such a bid would not be acceptable. A bid made at a price point percentage of 46 or higher, however, would be acceptable, since it is at least 1 percent higher than the reserve price: $\{(46-45)/100\} * R$ equals $(1/100) * R$.

¹¹⁵ See *supra* Section [[III Minimum Geographic Area for Bidding]].

¹¹⁶ For purposes of bidding, census block groups will be referred to as “items” in the bidding system.

of such applicants to select the same state during the pre-auction application process, as discussed above.¹¹⁷ Specifically, our proposed application procedures require that commonly-controlled applicants or applicants subject to joint bidding arrangements not select on their applications any of the same states but instead resolve any overlapping state bidding interests prior to becoming qualified to participate in the auction. We seek comment on this proposal.

a. Bid for a Single Area

88. A bid is an offer to serve the locations in eligible census blocks within the indicated census block group at the indicated performance tier and latency combination for a total annual amount of support that is not less than the implied annual support at the price point percentage specified by the bidder and not more than the reserve price. In each round, a bid for a single available census block group with reserve price R consists of three pieces: a performance tier, T , latency, L , and a price point that is a percentage not less than the current round's base clock percentage and less than the previous round's base clock percentage. For a given round, a census block group can be included in at most one bid—whether a bid on a single census block group or a package bid on multiple census block groups—made by a bidder, and a bidder can only bid on census block groups that are in states that the bidder selected on its application. If a bidder wants to know the annual support amount implied by its bid percentage, the bidder can calculate the implied annual support, by taking the smaller of the reserve price R and the annual support calculated according to the implied support formula.¹¹⁸

89. Before the budget has cleared, a bidder may change the performance tier and latency combination in any of its bids from the previous round, provided the bidder qualified for the performance tier and latency combination for the state at the application stage.

b. Bid for a Package of Areas

90. We propose package bidding procedures that will enable bidders to place bids to serve a bidder-specified list of census block groups, with corresponding bid processing procedures that may assign fewer than the full list of areas to the bidder as long as the funding associated with the assigned areas is at least equal to a bidder-specified percentage of the funding requested for the complete list of areas.¹¹⁹ We propose to allow a bidder to specify a package bid by providing a list of census block groups, a performance tier and latency combination for each census block group in the list, a single price point for the list, and a minimum scale percentage for the package. The minimum scale percentage must be no higher than a maximum value defined by the Commission, which will be less than 100 percent.¹²⁰ Thus, a package bid is an offer by the bidder to serve any subset of areas in the list at the support amount implied at the bid percentage, provided that the ratio of the total implied support of the subset to the total implied support of the list meets or exceeds the bidder-defined minimum scale percentage.

91. We propose further procedures defining acceptable package bids. We propose that each census block group in the list may have a different performance tier and latency combination. Every census block group in a package bid must be in the same state. As discussed above, for a given round, a

¹¹⁷ See *supra* Section [IV.A State Selections and Impermissible State Overlaps]].

¹¹⁸ For a price point PP , the *implied support* is the smaller of R and $\left(\frac{PP-(T+L)}{100}\right)R$. See *supra* [[para. 79]].

¹¹⁹ When determining whether the minimum scale condition is met, the system will use support amounts as implied at the bid percentage.

¹²⁰ If the Commission sets the maximum value for the scale percentage to be 80 percent, then the bidder may not specify a minimum scale percentage of more than 80 percent. That is, as proposed, a bidder may not submit an all-or-nothing package bid. As an example of how the minimum scale percentage will be applied, if the maximum scale percentage is 80 percent and a bidder bids for a package of five identical areas and specifies a scale percentage of 60 percent, then the bidder may be assigned support for three, four, or five of the census block groups (60%, 80%, or 100%, respectively), but not for one or two areas.

census block group can appear in at most one bid—either a single bid or a package bid—made by a given bidder. A bidder may change the minimum scale percentage in any package bid from round to round. We seek comment, as well, on whether we should set a limit on the total amount of implied support that may be included in a single package. Limiting packages to the census block groups within a state will impose a *de facto* limit on the total support that may be assigned in a package bid, but we ask whether a limit, lower than the maximum possible state-level amount of support, should also be implemented.

92. We also seek comment on the appropriate upper limit of the bidder-specified minimum scale percentage. We propose 80 percent as the Commission-defined maximum of the minimum scale percentage. We propose to use an upper limit less than 100 percent so that small overlaps in the areas included in package bids do not prevent support from being assigned to a potentially much larger number of areas included in the package bids, which could occur if packages were assigned on an all-or-nothing basis. While an upper limit that is too high will not be effective for this purpose, an upper limit that is too low will hinder bidders' ability to achieve a minimum amount of funding.

93. The proposed package bidding format permits a bidder to choose between a minimum amount of support or no support, guaranteeing that the bidder will not be assigned an amount that does not meet the bidder's specified minimum scale requirement.¹²¹ We seek comment on the proposed package bidding format. Will this package bidding format facilitate packages that include areas with diverse costs, population densities, and other characteristics? Would the option to submit package bids be useful to both bidders that have small networks and bidders that have large networks?

5. Bids Placed by Proxy Bidding Instructions

94. We seek comment on the possibility of using proxy bidding, which could reduce bidders' need to submit bids manually every bidding round and provide bidders with a safeguard against accidentally failing to submit a bid. With proxy bidding, a bidder could submit instructions for the system to continue to bid automatically for an area with a specified performance tier and latency combination in every round until either the base clock percentage falls below a bidder-specified proxy amount, the bidder intervenes to change its bid, or the area is assigned, whichever happens first. In the auction format we propose, proxy bidding instructions for a single area or a package of areas would contain all the information required for these bids, and the specified price point percentage would potentially be valid for multiple rounds, as described below. We propose that proxy bidding instructions will not be permitted to include instructions for changes to the performance tier and latency combination, to the minimum scale percentage of a package bid, nor to the specified area or areas.

95. Under our proposal for proxy bidding, during a round, the bidding system will generate a bid at the base clock percentage on behalf of the bidder as long as the percentage specified in the proxy instruction is equal to or below the current base clock percentage. If the proxy percentage exceeds the current base clock percentage but is lower than the prior round's base clock percentage, then the bidding system will generate a bid at the price point percentage of the proxy. These bids would be treated by the auction system in the same way as any other bids placed in the auction. Thus, proxy instructions will remain effective through the round in which the base clock percentage is equal to or less than the proxy percentage.¹²² During a bidding round, a bidder may cancel or enter new proxy bidding instructions. Since proxy instructions may expire as the base clock descends, even with proxy bidding, bidders must monitor the progress of the auction to assure that they do not need to cancel or adjust their proxy instructions.

¹²¹ A party in the record suggests that limited package bidding be permitted since multiple areas may utilize shared infrastructure. See Letter from John P. Janka, Counsel to ViaSat, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 et al., at Attach at 4 (filed May 2, 2017) (ViaSat May 2, 2017 *Ex Parte* Letter).

¹²² As set forth below, proxy instructions will carry forward after the budget clears, including proxy instructions for packages and any unassigned remainder areas in the package that carry forward. See *infra* Section [[VI.B.4 Bids and Bid Processing if the Budget Cleared in a Previous Round]].

96. We seek comment on whether to provide for proxy bidding in this way. We also seek comment on whether the bidding system should alert bidders regarding the status of their proxy instructions (i.e., whether the proxy instructions remain in effect).

97. Under our proposal, proxy bidding instructions will be treated as confidential information and would not be disclosed to the public at any time after the auction concludes, because they may reveal private cost information that would not otherwise be made public (e.g., if proxy bidding instructions are not fully implemented because the base clock percentage does not fall as low as the specified proxy percentage). However, the amount of support awarded for any assigned bid, regardless of whether it was placed by the bidder or by the bidding system according to proxy bidding instructions, will be publicly disclosed. We seek comment on these proposals.

6. Activity Rules

98. We propose to measure a bidder's bidding activity in a round in terms of implied support dollars and to adopt activity rules that prevent a bidder's activity in a round from exceeding its activity in the previous round. Activity rules for bidding are used in multiple round auctions to encourage bidders to express their bidding interests early and sincerely, thus generating reliable information about the level of bidding across the various geographic areas in the auction. Activity rules promote the orderly collection of bids across rounds and limit undesirable strategic bidding behavior such as insincerely switching bids across areas, waiting to bid until everyone else has bid, or suddenly increasing the number of areas for which bids were submitted. Activity rules balance these concerns with allowing bidders some freedom to react to competition and price changes.

99. For this descending clock auction, we propose that a bidder's activity in a round: (1) be calculated as the sum of the implied support amounts (calculated at the bid percentage) for all the areas bid for in the round, and (2) not exceed its activity from the previous round.¹²³ We further propose that a bidder be limited in its ability to switch to bidding for support in different areas from round to round. Specifically, a bidder's activity in a round from areas that the bidder did not bid on at the previous round's base clock percentage cannot exceed an amount determined by a percentage (the "switching percentage") of the bidder's total implied support from bids at the previous round's base clock percentage.¹²⁴ We propose to set this switching percentage at 10 percent initially and to give the Bureaus the discretion to change the switching percentage, with adequate notice, before a round begins.

100. We seek comment on these proposed activity rules. In addition, we ask for comment on the appropriate size of the switching percentage, and, if it is to be changed across rounds, when and how it should be changed. Will the proposed 10 percent switching percentage allow a bidder sufficient flexibility to react to other bidders' bids from the prior round?

101. Since bidding in rounds after the budget has cleared is limited to bidding to resolve competition among areas for which more than one bidder was willing to accept the base clock percentage in the round when the budget cleared, a bidder's permissible bids after clearing will necessarily satisfy the activity rules, which therefore are no longer constraining. After the budget clears, we propose that a bidder not be allowed to switch to bidding for different areas or to change the performance tier and latency combination of a bid.¹²⁵

¹²³ This implies that the activity of a bidder that submits the same bids in every round (for the same areas at the same performance tier and latency) will decline across rounds because the base clock percentage is decremented across rounds.

¹²⁴ Activity includes bids made at all price points in a round, while the switching percentage applies only to implied support from bids made at the previous round's base clock percentage.

¹²⁵ The budget clearing determination is contingent on having sufficient support funds to provide support for the areas for which bids are submitted in that round. If bids for additional areas were permitted after the budget cleared, there may be insufficient funds in the budget to support them.

B. Bid Processing

102. We propose that once a bidding round closes, the bidding system will consider the submitted bids to determine whether an additional round of bidding at a lower base clock percentage is needed to bring the amount of requested support down to a level within the available budget.¹²⁶ If the total requested support at the base clock percentage exceeds the budget, another bidding round occurs. In a round in which the amount of overall requested support falls to a level within the budget, bid processing will take the additional steps of assigning support for a given area to the bid at the lowest percentage (as measured by the price point percentage of the bid) and determining support amounts to be paid according to a second-price rule. If there are multiple bids for a given area at the base clock percentage, the bidding system will commence another round of bidding to resolve the competition, and rounds will continue with bidding for these areas at lower base clock percentages until, for each of the contested areas, there is a single low bid. The winning bidder will then be assigned support at the price percentage of the second lowest bid. Additional details and examples of bid processing will be provided in the technical guide released by the Bureaus.

103. As a result of these proposed procedures, the bids that can be assigned under the budget in the round when the budget clears and in any later rounds will determine the areas that will be provided support under Phase II. At most, one bid per area will be assigned support, and as set forth above, the winning bid for an area will generally be the bid made at the lowest percentage.¹²⁷ The specifications of that bid, in turn, determine the performance tier and latency combination at which service will be provided to the eligible locations in the area.

104. ViaSat has suggested an alternative approach to assigning winning bids. Instead of ranking bids based strictly on the percentage of the reserve price, ViaSat proposes that the auction system take the number of locations to be covered, as well as performance tier and latency, into account when assigning winning bids.¹²⁸ As another party has observed, however, this suggestion conflicts with the Commission's decision not to assign support based on the number of locations covered and therefore is beyond the scope of this Public Notice.¹²⁹

105. We seek comment generally on our proposed approach to assigning bids and determining support amounts. We ask any commenters supporting an alternative approach to consider the goals of the Commission in the Connect America Fund Phase II proceeding, the decisions made to date on auction design,¹³⁰ and how any suggested alternatives would integrate with other aspects of the auction design.

¹²⁶ See Section [[V.I.B.2.a Aggregate Cost at the Base Clock Percentage]] for how requested support in this context is calculated.

¹²⁷ Each bid will be assigned a pseudo-random number, and ties will be broken using these numbers. If the bid made at the lowest percentage for an area is a package bid with a bid percentage above the round's base clock percentage and that package bid does not meet the scale condition, it is possible that the area is assigned to another bidder that bid for it at a higher percentage.

¹²⁸ See ViaSat May 2, 2017 *Ex Parte* Letter at Attach. at 5-6. This approach would use a mathematical optimization procedure to determine winning bids. *Id.*

¹²⁹ See Letter from Rebekah P. Goodheart et al., Counsel to the Association of Missouri Electric Cooperatives, Midwest Energy Cooperative, HomeWorks, Alger Delta & Great Lakes Energy et al., WC Docket No. 10-90, at Attach. (filed June 14, 2017) (attaching a paper by David J. Salant, Scoring rules and the CAF-2 auction design (2017) analyzing ViaSat's proposal); *Phase II Auction Order*, 31 FCC Rcd at 5977, para. 85. In response, ViaSat asserts that its proposal is not untimely and was submitted "to inform the Commission's efforts to further define the structures and procedures" for the Phase II auction. Letter from John P. Janka, Counsel to ViaSat, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 et al. (filed July 6, 2017) (attaching Paul Milgrom's Response to the Rural Coalition Filing).

¹³⁰ *Phase II Auction Order*, 31 FCC Rcd at 5975-79, paras. 82-90.

106. Our specific proposals for bid processing procedures fall into three categories: before, during, and after the round in which the budget clears. We address them in order below, after first addressing proposals for the base clock percentage.

1. Base Clock Percentage

107. In each of a series of discrete bidding rounds, a bidder will be offered an amount of support for an area at a specified performance tier and latency combination that is determined by the base clock percentage for the round. By bidding at that base clock percentage, the bidder indicates that it is willing to provide the required service within the bid area in exchange for a payment at least as large as that implied by the base clock percentage.¹³¹ The opening base clock percentage will determine the highest support amount that the bidder will be offered in the auction for a given area and performance tier and latency combination.¹³²

a. Opening Base Clock Percentage

108. We propose to start the base clock percentage at 100 percent of an area's reserve price plus an additional percentage equal to the largest performance tier and latency combination discount that may be submitted by any qualified bidder in the auction. Therefore, if any applicant is qualified to bid to provide service at the Minimum performance tier and high latency—a performance tier and latency combination assigned a weight of 90—we propose that the base clock percentage will start at 190 percent. Starting the clock at this level will allow bidders at the lower performance tier and latency combinations multiple bidding rounds in which to compete for support simultaneously with bidders offering higher performance tier and latency combinations.¹³³

109. We seek comment on this approach to setting the initial base clock percentage, and request that commenters, in considering the proposal, bear in mind the Commission's previous decisions to: (1) provide an opportunity for bidders offering different performance standards to compete against each other, and (2) balance this approach with the use of performance scoring weights previously determined by the Commission.

b. Clock Decrements

110. We propose to decrement the base clock percentage by 10 percentage points in each round. However, we also propose to provide the Bureaus with the discretion to change that amount during the auction if it appears that a lower or higher decrement would better manage the pace of the auction. For example, if bidding is proceeding particularly slowly, we may increase the bid decrement to speed up the auction, recognizing that bidders have the option of bidding at an intra-round price point percentage if the base clock percentage falls to a percentage corresponding to an amount of support that is no longer sufficient. Under this proposal, we would begin the auction with a decrement of 10 percent and limit any further changes to the decrement to between 5 percent and 20 percent.

111. We ask commenters to address proposals to begin the auction with a base clock percentage decrement of 10 percent, with subsequent decrements between 5 and 20 percent. We also seek comment on circumstances under which we should consider changing the decrement during the auction.

¹³¹ Under the second-price rule, a winning bidder will receive an annual support amount that is at least as great as the bid clock percentage. A bidder may also make a bid at a percentage higher than the base clock percentage but lower than the previous round's base clock percentage.

¹³² Some bidders may be offered the support amount corresponding to the base clock percentage for several rounds.

¹³³ At base clock percentages above 100, the implied support amounts of bids at higher performance tier and latency combinations may not decrease from round to round, remaining instead at the area's full reserve price.

2. Bid Processing After a Clock Round Before the Clearing Round

a. Aggregate Cost at the Base Clock Percentage

112. Under our proposed approach to bid processing, after each clock round until the budget has cleared, the bidding system will calculate an “aggregate cost,” an estimate of what it would cost to assign support at the base clock percentage to the bids submitted in the round, in order to determine whether the budget will clear in that round. More precisely, the aggregate cost is the sum of the implied support amounts for all the areas receiving bids at the base clock percentage for the round, evaluated at the base clock percentage. The calculation counts each area only once, even if the area receives bids, potentially including package bids, from multiple bidders. If there are multiple bids for an area at different performance tier and latency combinations, the calculation uses the bid with the highest implied support amount. If the aggregate cost for the round exceeds the budget, the bidding system will implement another regular clock round with a lower base clock percentage.

b. Clearing Determination

113. The first round in which the aggregate cost, as calculated above, is less than or equal to the overall support budget is considered the “clearing round.” In the clearing round, the bidding system will further process bids submitted in the round, to determine those areas that can be assigned and the support amounts winning bidders will receive. Once the clearing round has been identified, the system no longer calculates the aggregate cost, even if there are subsequent bidding rounds.

3. Bid Processing in the Clearing Round

114. In the clearing round, the bidding system will consider bids in more detail to determine which can be identified as winning, or “assigned,” bids in that round; the “second prices” to be paid for winning bids; and which bids will carry over for bidding in an additional bidding round or rounds. We address our proposed procedures for these determinations below.

115. Until the clearing round, the auction is generally driven by cross-area competition for the budget, and until the clearing round, implied support amounts for all areas are reduced proportionately. In estimating cost, the system does not determine which of multiple bids competing for support in the same area will be assigned, although it does take into account that only one bid per area may be assigned. Processing during the clearing round considers intra-area competition as well, assigning support to bids that require the lowest level of support for a given area, as long as any assigned package bids meet the bidder’s minimum scale percentage. Bid processing in the clearing round also determines support amounts for assigned bids according to a second-price rule, so that bids are supported at a price percentage at least as high as the bid percentage.

a. Assignment

116. Once bid processing has determined that the current round is the clearing round, the bidding system will begin to assign winning bids, awarding support to at most one bid for a given area. The system will first assign bids made at the base clock percentage for areas not bid on by another bidder at the base clock percentage. Any package bids that are assigned must meet the bidder’s minimum scale percentage.

117. Under the proposed bid processing procedures, the system then considers all other bids submitted in the round in ascending order of price point percentage to see if additional bids can be assigned and, considering the bids assigned so far, to determine the highest price point percentage at which the total support cost of the assigned bids does not exceed the budget (the “clearing price point”).¹³⁴ Bids at price point percentages above the clearing price point are not assigned.

¹³⁴ Recall that a bid may be placed at any price point percentage equal to or greater than the current base clock percentage and less than the previous round’s base clock percentage.

118. As it considers bids in ascending price point percentage order, the system assigns a bid if no other bid for the same area has already been assigned, as long as the area did not receive multiple bids at the base clock percentage and the areas to be assigned in a package bid meet the bid's minimum scale percentage.¹³⁵ The bidding system also checks to ensure that sufficient budget is available to assign the bid.

119. To determine whether there is sufficient budget to support a bid, the bidding system keeps a running sum of support costs. This cost calculation at price point percentages between the current and previous base clock percentages extends the concept of the aggregate cost calculation (which identifies the clearing round) to take into account, at sequential intermediate price points, the cost of bids that have been assigned so far and the estimated cost of bids that have not been assigned.

120. We propose that at each ascending price point increment, starting at the base clock percentage, the running cost calculation is the sum of support for three types of bids: (1) for assigned bids for which there were no other bids for support for their respective areas at price points lower than the currently-considered price point percentage, the system calculates the cost of providing support as the amount of support implied by the currently-considered price point, (2) for assigned bids for areas that did receive other bids at price points lower than the currently-considered price point, support is generally calculated as the amount implied by the next-higher price point at which the area received a bid (where next-higher is relative to the price point of the assigned bid, not the currently-considered price point),¹³⁶ and (3) competing bids at the base clock percentage are not assigned and are evaluated as they were in the pre-clearing aggregate cost calculation: only one bid per area is included in the calculation, and if there are bids for an area at different performance tier and latency combinations, the calculation uses the bid with the highest implied support amount, all evaluated at the base clock percentage.

121. The auction system continues to assign bids meeting the assignment criteria in ascending price point order as long as the cost calculation does not exceed the budget. The highest price point at which the running total cost will not exceed the budget is identified as the clearing price point. This process will be addressed in more detail in the technical guide released by the Bureaus.

b. Support Amount Determination

122. Bids that were assigned for areas that received no other bids at less than the clearing price point are supported at an amount implied by the clearing price point percentage.

123. Bids assigned in the clearing round, when there was also a bid at a price point higher than the base clock percentage, are generally supported at an amount determined by the price point percentage of the higher unassigned bid. For example, if there are two bids for an area, the lower bid is supported at the bid price point of the higher bid.

124. We seek comment on these assignment and pricing proposals for the clearing round.

4. Bids and Bid Processing if the Budget Cleared in a Previous Round

a. Carried-Forward and Acceptable Bids

125. Once the budget clears, further bidding resolves competition for areas where more than one bidder is still bidding for support at the lowest base clock percentage announced so far, which is the base clock percentage in the previous round. Therefore, bidding rounds continue after the clearing round at lower base clock percentages, but bids are restricted to areas for which the bidder had bid at the

¹³⁵ Ties are broken using pseudo-random numbers.

¹³⁶ The only exception to this arises if there is a bid for the area with a bid percentage below the bid percentage of the winning bid for the area and the former bid cannot be assigned because it is a package bid that does not meet the scale condition. In that case, the support is calculated as the amount implied by the bid percentage of the winning bid.

clearing round's base clock percentage but which could not be assigned in the clearing round. Such bids may be for a given unassigned area that received multiple single bids, package bids that were not assigned because the bidder's minimum scale percentage for the package was not met, or remainders of package bids—unassigned areas that formed part of package bids that were partially assigned.

126. We propose that these bids at the base clock percentage for unassigned areas will carry over automatically to the next bidding round at the previous round's clock percentage, since the bidder had previously accepted that percentage. In the round into which the bids carry forward, the bidder may also bid for support for these areas at the current round's base clock percentage or at intermediate price points. In rounds after the clearing round, a bidder cannot switch to bidding for an area for which it did not bid in the previous round, nor can a bidder bid at a different performance tier and latency combination for an area for which it bid previously.

127. While bids for unassigned packages will carry over at the previous clock percentage, the bidder for such a package may group the bids for the areas in the package into smaller packages and bid on those smaller packages at current round percentages. However, the unassigned remainders of assigned package bids will carry over as individual area bids. Any bids the bidder places for the remainder areas at the new round percentages must be bids for individual areas—that is, the bidder cannot create a new package of any of the unassigned remainders.

128. We propose that proxy instructions, if at a price point percentage below the base clock percentage of the previous round, continue to apply in rounds after the clearing round under the same conditions that apply to other bids. For package bids made by proxy that are only partially assigned because there are multiple bids at the base clock percentage, the proxy instructions continue to apply to the unassigned areas in the package bid. That is, the price point percentage specified in the proxy instructions would apply to bids for the individual remainder areas.

b. Bid Processing

129. As in the clearing round, in subsequent rounds the system considers bids for assignment and support amount determination in ascending price point percentage order. The system first considers bids at the new round's base clock percentage, and any bids for areas that received no other bids at the base clock percentage are assigned, as long as any package bid meets the minimum scale percentage of the bid. The system then processes bids in ascending price point order, assigning those bids for as yet unassigned areas, as long as any package bids meet the minimum scale condition.¹³⁷

130. If there is only one bid for an area in a round, the assigned bid is paid at the base clock percentage for the previous round, consistent with the second-price rule. If an assigned bid is for an area that received more than one bid in the round, the assigned bid is supported at the next higher price point percentage at which there is a bid for the area.¹³⁸

131. If there is more than one bid for an area at the current base clock percentage, including a package bid, there will be another bidding round at a lower base clock percentage, with the same restrictions on bids and following the same assignment and pricing procedures.

132. We seek comment on these proposed procedures for assigning bids and determining support amounts in rounds after the clearing round.

¹³⁷ The technical guide released by the Bureaus will provide further details on how the minimum scale condition will be applied and how package bids will be assigned in rounds after the clearing round.

¹³⁸ The only exception to this arises if there is a bid for the area with a bid percentage below the bid percentage of the winning bid for the area and the former bid cannot be assigned because it is a package bid that does not meet the scale condition. In that case, the support is calculated as the amount implied by the bid percentage of the winning bid.

C. Closing Conditions

133. Under the proposed auction design, the auction will end once the overall budget has cleared and there are no longer competing bids for any areas.

D. Availability of Auction-Related Information

134. As in past Commission auctions, we propose that the public will have access to certain auction information, while auction participants will have secure access to additional, non-public information.

1. Information Available to Bidders During the Auction

135. We propose to limit the disclosure of information regarding bidding in the auction. During the auction, we propose to make available to bidders sufficient information about the status of their own bids and the eligible areas in the states in which they are qualified to bid to allow them to bid confidently and effectively. At the same time, we propose to restrict the availability of information that may facilitate identification of other bidders and their bids, which could potentially lead to undesirable strategic bidding. With that distinction in mind, after each round ends, and before the next round begins, we propose to make the following information available to individual bidders:

- The base clock percentage for the upcoming round.
- The aggregate cost, as calculated above, at the previous round's base clock percentage up until the budget clears.
 - The aggregate cost at the base clock percentage is not disclosed for the clearing round or any later round.
- The bidder's activity, based on all bids in the previous round, and activity based on bids at the base clock percentage, whether submitted directly or by proxy. These will determine, respectively, the maximum activity the bidder is allowed in the next round and the maximum activity the bidder is allowed in the next round on areas for which the bidder did not bid at the prior round's base clock percentage.
 - In rounds after the clearing round, the bidder's assigned support and the implied support of its carried-forward bids will be available.
- Summary statistics of the bidder's bidding in the previous round, including:¹³⁹
 - The number of areas for which it bid, at the clock percentage and at other price points.
 - Breakdowns of activity and number of areas by proxy bids, including proxy instructions for future rounds.
 - After the clearing round, areas and support amounts it has been assigned and those for which it is still bidding.
 - Status of carried-forward bids.
- For all eligible areas in all states, including those in which the bidder was not qualified to bid or is not bidding, whether the number of bids placed at the previous round's base clock percentage was 0, 1, or 2 or more.
 - The performance tier and latency combination of the bids is not disclosed.

136. Prior to each round, we also propose to make available to bidders the support amounts, corresponding to the areas and performance tier and latency combinations for which they are eligible to bid, that are implied by the round's base clock percentage.

¹³⁹ A bidder will also have access to a downloadable file with all of its bids submitted for each round.

2. Limited Information Procedures

137. Consistent with the Commission's practice in the Mobility Fund Phase I auction (Auction 901) and recent spectrum auctions, we propose to adopt procedures for limited information disclosure for Auction 903.¹⁴⁰

138. Specifically, we propose to withhold from the public, as well as other applicants, the following information related to the short-form application process:

- The state(s) identified by an applicant in which it is interested in bidding.
- The state(s) for which the applicant has been determined to be eligible to bid.
- The performance tier and latency combination(s) identified by an applicant.
- The performance tier and latency combination(s) for which the applicant has been determined to be eligible to bid.
- Operational information that is intended to demonstrate an applicant's ability to meet the public interest obligations for each performance tier and latency combination that the applicant has identified in its application.

139. We also propose to withhold financial information submitted by an applicant that also files financial information on FCC Form 481 pursuant to a protective order.¹⁴¹ We propose to identify such applicants via a question on the short-form application. All other applicants may request confidential treatment of their financial data by submitting a request under Section 0.459 at the same time such information is submitted.¹⁴² We caution that requests that we withhold financial data that applicants elsewhere disclose to the public will not be granted.

140. In addition, until our announcement of auction results, we do not intend to publicly release information pertaining to the progression of the Phase II auction. This includes information such as the round, base clock percentage, aggregate cost (as it relates to the budget), or any information that may reveal or suggest the identities of bidders placing bids and taking other bidding-related actions. While auction participants will have access to some of this information to inform their bidding, such information is of little value to the general public, particularly when we project the auction to close within a month. At the same time, the public release of preliminary auction data would impose non-trivial costs on the Commission to devise and set up a mechanism for that release and to prepare aggregated preliminary data at the end of each round or other appropriate interval. Furthermore, due to the preliminary and complex nature of the data, its release may engender confusion among the general public.

141. After the close of bidding and announcement of auction results, we propose to make publicly available all short-form application information and bidding data, except for an applicant's

¹⁴⁰ See 47 CFR § 1.21003(b)(1). See also, e.g., *Auction of Advanced Wireless Services Licenses Scheduled for November 13, 2014, Notice and Filing Requirements, Reserve Prices, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 97*, 29 FCC Rcd 8386, 8428-31, paras. 149-57 (WTB 2014) (*Auction 97 Procedures Public Notice*); *Auction of 700 MHz Band Licenses Scheduled for January 24, 2008; Notice and Filing Requirements, Minimum Opening Bids, Reserve Prices, Upfront Payments, and Other Procedures for Auctions 73 and 76*, Public Notice, 22 FCC Rcd 18141, 18181-85, paras. 145-56 (WTB 2007); *Auction of Advanced Wireless Services Licenses Scheduled for June 29, 2006; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures for Auction No. 66*, Public Notice, 21 FCC Rcd 4562, 4600-05, paras. 140-57 (2006).

¹⁴¹ See *Connect America Fund*, Fifth Order on Reconsideration, 27 FCC Rcd 14549, 14565-66, paras. 16-17 (2012) (protecting privately-held rate-of-return carriers' financial information from public disclosure).

¹⁴² 47 CFR § 0.459.

operational information, confidential financial information, and proxy bidding instructions.¹⁴³ This approach is consistent with the Commission's practice in the Mobility Fund Phase I auction and our typical spectrum auctions.¹⁴⁴ We recognize that the Phase II auction bidding data we propose to release would presumably encompass bids for eligible areas that do not receive Phase II support and therefore may be eligible for Remote Areas Fund (RAF) support in a subsequent auction, and that these non-winning Phase II bids may be used to inform bids in the RAF auction. However, that information is of value to all potential RAF auction participants – not just those that participated in the Phase II auction and thus potentially would have had access to information about bids in those areas. Accordingly, the public release of Phase II bidding data would prevent asymmetric information from being disseminated among potential RAF auction bidders, which could ultimately distort competition in the RAF auction.

142. We seek comment on our proposals to limit the availability of bidding information during the auction and to adopt limited information procedures for the Phase II auction concerning the application and bidding data that will be publicly available before, during, and after the auction.

VII. PROCEDURAL MATTERS

A. Supplemental Initial Regulatory Flexibility Analysis

143. As required by the Regulatory Flexibility Act of 1980 (RFA),¹⁴⁵ the Commission prepared Initial Regulatory Flexibility Analyses (IRFAs) in connection with the *USF/ICC Transformation Order FNPRM*, the *April 2014 Connect America FNPRM*, and the *Phase II Auction FNPRM* (collectively, *Phase II FNPRMs*),¹⁴⁶ and Final Regulatory Flexibility Analyses (FRFAs) in connection with the *April 2014 Connect America Order*, the *Phase II Auction Order*, and the *Phase II Auction FNPRM Order* (collectively, *Phase II Orders*).¹⁴⁷ The Commission sought written public comment on the proposals in the *Phase II FNPRMs*, including comments on the IRFAs. The Commission did not receive any comments in response to those Regulatory Flexibility Analyses.

144. The IRFAs for the *Phase II FNPRMs* and the FRFAs for the *Phase II Orders* set forth the need for and objectives of the Commission's rules for the Phase II auction; the legal basis for those rules; a description and estimate of the number of small entities to which the rules apply; a description of projected reporting, recordkeeping, and other compliance requirements for small entities; steps taken to minimize the significant economic impact on small entities and significant alternatives considered; and a statement that there are no federal rules that may duplicate, overlap, or conflict with the rules.¹⁴⁸ The proposals in this Public Notice do not change any of those descriptions. However, because this Public Notice proposes specific procedures for implementing the rules proposed in the *Phase II FNPRMs* and adopted in the *Phase II Orders*, we have prepared a supplemental IRFA seeking comment on how the

¹⁴³ The exception would include financial information that is the subject of a request under Section 0.459 that has not yet been decided.

¹⁴⁴ See, e.g., *Mobility Fund Phase I Auction Scheduled for September 27, 2012; Notice and Filing Requirements and Other Procedures for Auction 901*, 27 FCC Rcd 4725, 4767, para. 147 (WTB 2012); *Auction 97 Procedures Public Notice*, 29 FCC Rcd 8386.

¹⁴⁵ 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Public L. No. 104-121, Title II, 110 Stat. 857 (1996).

¹⁴⁶ *USF/ICC Transformation Order FNPRM*, 26 FCC Rcd at 18364-95 (Appendix P, Initial Regulatory Flexibility Analysis); *April 2014 Connect America FNPRM*, 29 FCC Rcd at 7216-44, (Appendix D, Initial Regulatory Flexibility Analysis); *Phase II Auction FNPRM*, 31 FCC Rcd at 6078-103 (Appendix D, Initial Regulatory Flexibility Analysis).

¹⁴⁷ *April 2014 Connect America Order*, 29 FCC Rcd at 7190-215 (Appendix C, Final Regulatory Flexibility Analysis); *Phase II Auction Order*, 31 FCC Rcd at 6050-77 (Appendix C, Final Regulatory Flexibility Analysis); *Phase II Auction FNPRM Order*, 32 FCC Rcd at 1654-64 (Final Regulatory Flexibility Analysis Appendix).

¹⁴⁸ See *supra*. nn. [[150, 151]].

proposals in this Public Notice could affect those Regulatory Flexibility Analyses.

145. The proposals in this Public Notice include procedures for awarding Phase II support through a multi-round, reverse auction, the minimum geographic area for bidding in the auction, aggregating eligible areas into larger geographic units for bidding, setting reserve prices, capping the amount of support per location provided to extremely high-cost census blocks, and the availability of application and auction information to bidders and to the public during and after the auction. This Public Notice also includes detailed proposed bidding procedures for a descending clock auction, including bid collection, clock prices, proposed bid format, package bidding format, proxy bidding, bidder activity rules, bid processing, and how support amounts are determined. The bidding procedures proposed in this Public Notice are designed to facilitate the participation of qualified service providers of all kinds, including small entities, in the Phase II program, and to give all bidders, including small entities, the flexibility to place bids that align with their intended network construction or expansion, regardless of the size of their current network footprints.

146. To implement the rules adopted by the Commission in the *Phase II Orders* for the pre-auction process, this Public Notice proposes specific procedures and requirements for applying to participate and becoming qualified to bid in the Phase II auction, including designating the state(s) in which an applicant intends to bid, and providing operational and financial information designed to allow the Commission to assess the applicant's qualifications to meet the Phase II public interest obligations for each area for which it seeks support. The Public Notice also makes proposals that address the types of further information that may be required in the post-auction long-form application that a winning bidder must file to become authorized to receive support. The application procedures proposed in this Public Notice are intended to require applicants to submit enough information to permit the Commission to determine their qualifications to participate in the Phase II auction, without requiring so much information that it is cost-prohibitive for any entity, including small entities, to participate.

147. As noted above, we seek comment on how the proposals in this Public Notice could affect the IRFAs for the *Phase II FNPRMs* or the FRFAs in the *Phase II Orders*. Such comments must be filed in accordance with the same filing deadlines for responses to this Public Notice and have a separate and distinct heading designating them as responses to the IRFAs and FRFAs.

B. Deadlines and Filing Procedures

148. Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document in AU Docket No. 17-182. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- *Electronic Filers:* Comments may be filed electronically using the Internet by accessing the ECFS: <http://apps.fcc.gov/ecfs/>.
- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries

must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

149. *People with Disabilities*: To request materials in accessible formats (braille, large print, electronic files, audio format) for people with disabilities, send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

150. This proceeding has been designated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.¹⁴⁹ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

C. Contacts

151. For further information concerning this proceeding, contact the offices listed below:

Telecommunications Access Policy Division, Wireline Competition Bureau

Heidi Lankau or Katie King, at (202) 418-7400

Auctions and Spectrum Access Division, Wireless Telecommunications Bureau

Mark Montano or Angela Kung, at (202) 418-0660

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¹⁴⁹ 47 CFR §§ 1.1200 *et seq.*

APPENDIX A**Proposed Auction 903 Short-Form Application Operational Questions**

Has the applicant previously deployed consumer broadband networks (Yes/No)? If so, identify the date range for when broadband service was offered and in which state(s) service was offered. What specific last mile and interconnection (backhaul) technologies were used? How many subscribers were served? What services (e.g., voice, video, broadband Internet access) were provided?

Answer for each state the applicant selected in its application:

1. Which network architectures and technologies will be used in the applicant's proposed deployment? How will voice services be provided? How will broadband Internet access service be provided?
2. What are the relevant industry standards for the last-mile technologies in the applicant's proposed deployment? What features of this technology and proposed network will enable performance tier, latency and voice service requirements to be met?
3. Can the applicant demonstrate that the technology and the engineering design will fully support the proposed performance tier, latency and voice service requirements for the requisite number of locations during peak periods (Yes/No)? What assumptions about subscription rate and peak period data usage is the applicant making in this assertion? List the information that can be made available to support this assertion.
4. Can the applicant demonstrate that all the network buildout requirements to achieve all service milestones can be met (Yes/No)? Describe the information that the applicant can make available in a project plan to support this assertion.
5. For the proposed performance tier, latency and voice service, can the applicant demonstrate that potential vendors, integrators and other partners are able to provide commercially available and fully compatible network equipment, interconnection, last mile technology and customer premise equipment (CPE) at cost consistent with applicant's buildout budget and in time to meet service milestones (Yes/No)? Describe the information and sources of such information that the applicant could make available to support this response.
6. Can the applicant describe how the network will be maintained and services provisioned (Yes/No)? Can the applicant demonstrate that it can provide internally-developed operations systems for provisioning and maintaining the proposed network including equipment and segments, interconnections, CPE and customer services at cost consistent with applicant's buildout budget and in time to meet service milestones (Yes/No)? If not, can the applicant demonstrate that potential vendors, integrators, and other partners are able to provide commercially available and fully compatible operations systems and tools for provisioning and maintaining the proposed network at cost consistent with applicant's buildout budget and in time to meet service milestones (Yes/No)? Describe the information and sources of such information that the applicant could make available to support these responses.
7. If the applicant is using satellite technologies, describe the total satellite capacity available and possible methods the applicant will utilize to assign bandwidth and capacity for each spot beam.

APPENDIX B

Proposed Auction 903 Spectrum Chart

Spectrum Band/Service	Paired Licensed		Unpaired Licensed	Unlicensed
	Uplink Freq. (MHz)	Downlink Freq. (MHz)	Uplink & Downlink Freq. (MHz)	Unlicensed (MHz)
600 MHz	663-698	617-652		
Lower 700 MHz	698-716	728-746	716-728 (Downlink only)	
Upper 700 MHz	776-787	746-757		
800 MHz SMR	813.5/817-824	858.5/862-869		
Cellular	824-849	869-894		
Broadband PCS	1850-1915	1930-1995		
AWS-1	1710-1755	2110-2155		
AWS (H Block)	1915-1920	1995-2000		
AWS-3	1755-1780	2155-2180	1695-1710 (Uplink only)	
AWS-4	2000-2020	2180-2200		
BRS/EBS			2496-2690	
WCS	2305-2315	2350-2360	2315-2320, 2345-2350	
CBRS (3.5 GHz)			3550-3700	
2.4 GHz				2400-2485
5 GHz				5150-5250, 5725-5850
24 GHz				24,000-24,250
Ku Band	14,000-14,500	11,700-12,200		
Ka Band	27,500-30,000	17,700-20,000		

Abbreviations

AWS: Advanced Wireless Services

BRS/EBS: Broadband Radio Service/ Education Broadband Service

CBRS: Citizens Broadband Radio Service

PCS: Personal Communications Service

SMR: Specialized Mobile Radio

WCS: Wireless Communications Service